

The background of the cover is a photograph of an industrial refinery at night, illuminated by blue and white lights. The scene shows a complex network of pipes, metal structures, and large cylindrical storage tanks. A small fire or flare is visible at the top center. The title 'Iran Petroleum' is written in large, bold, orange letters, with 'MONTHLY' in a smaller black box above the 'P'.

# IRAN MONTHLY Petroleum

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## Iran Petchem Output on the Rise Rouhani Inaugurates 3 Petchem Projects in Assaluyeh

*Iranian President Hassan Rouhani officially inaugurated three major petrochemical projects in Assaluyeh; Phase III of the Pardis Petrochemical Plant, the Marjan Petrochemical Plant and Phase I of the power plant of the Damavand Petrochemical Plant.*

## Upstream Oil Activities Set to Grow

*Besides implementing development plans aimed at preserving and enhancing recovery rate from Iranian oil fields, the National Iranian Oil Company (NIOC) is pushing ahead with its talks to finalize oil agreements.*



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# Petroleum Industry Domestic Development

Habibollah Bitaraf  
Deputy Minister of Petroleum for Engineering, Research and Technology

Over recent years, Iran's petroleum industry has focused on basic development strategies as the driver of national economy and industry. The Iranian Ministry of Petroleum has gradually grown from a "major producer of crude oil" to a "major developer of oil industry upstream and downstream sectors". Currently, the activities of petroleum industry are extended beyond the Ministry of Petroleum to cover hundreds of small and large-sized companies producing hydrocarbon products, manufacturers of commodity and equipment, providers of engineering services, contractors and large holdings. This initiative started during the seventh post-revolutionary administration and under the financial and spiritual aegis of the Ministry of Petroleum with a view to introducing specialized disciplines pertaining to petroleum industry at prestigious universities for the purpose of development of specialized human resources and launching specialized petroleum institutes to expand scientific and research capacities in the oil sector.

In parallel with this fundamental measure, development of production capacity

and potentialities continued within the framework of development of large oil and gas fields, construction of petrochemical plants and refining facilities by leading international companies benefiting from the maximum capacity of small and big Iranian engineering firms and contractors. After the departure of foreign companies, national petroleum industry development did not stop, rather it continued at a high pace with more reliance on Iranian companies, while still benefiting from some foreign potentialities. National capabilities culminated in March 2018, when six phases of the South Pars gas field came on-stream simultaneously at a cost of \$20 billion. An immediate outcome of fundamental strategies, which worked out for the development of Iran's petroleum industry, has been encouraging private entities involved in the oil industry. Today, about 65% of commodities needed in petroleum industry projects are designed and manufactured by local private companies. When it comes to detailed engineering services for projects, 100% is handled by Iranian consulting and engineering companies, contractors and manufacturers.

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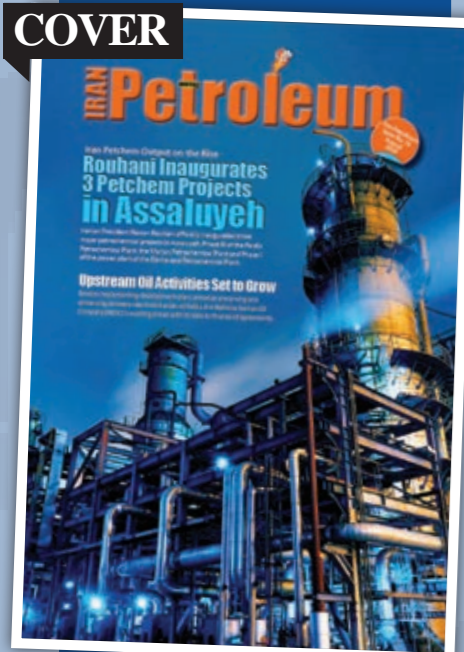
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## Iran Petchem Output on the Rise Rouhani Inaugurates 3 Petchem Projects in Assaluyeh

Iranian President Hassan Rouhani officially inaugurated three major petrochemical projects in Assaluyeh; Phase III of the Pardis Petrochemical Plant, the Marjan Petrochemical Plant and Phase I of the power plant of the Damavand Petrochemical Plant. The startup of the Pardis and Marjan plants would increase Iran's polymer product output from the current 62.15 million tonnes a year (mt/y) to 65.55 mt/y. In parallel with the aforesaid projects, two separate agreements were signed between National Iranian South Oil Company (NISOC) on one side, and Persian Gulf Petrochemical Industries Co. (PGPIC) and Marun Petrochemical Co. (MPC) on the other side for the renovation of flare gas gathering installations in the southwestern Khuzestan Province. Addressing the inauguration ceremony, Rouhani said: "Some of projects which became operational today had started during years of sanctions. They came on-stream today when the enemy is mulling over enforcing new sanctions. In the meantime, [agreements were] signed for new projects to start." "With the implementation of these projects, in addition to creating jobs in Iran, we have invested billions of dollars in production in order to supply domestic needs and export [products]. Multi-billion-dollar margins are projected to earn Iran in coming years," he added.

Photo: Mojtaba Mohammad Qoli



Rouhani said the petroleum industry was instrumental in Iran, noting that "14 major petrochemical projects" had been launched in the country since 2013, when he took office for his first tenure. "The inauguration of petrochemical projects will continue this year and in the following years," he said. Rouhani said staying clear of selling crude oil and natural gas and rather than that converting them to valuable products to be sold on domestic and foreign markets was of high significance. "This objective may be realized by attracting domestic and foreign investment," said the president. Rouhani boasted that his administration had managed to regain Iran's share in the Organization of the Petroleum Exporting Countries (OPEC), had made breakthroughs in the petrochemical sector and had become self-sufficient in the gas industry. The Iranian president went on to highlight an economic and psychological war initiated against Iran, adding: "When the enemy intends to impose sanctions on us it targets oil industry, oil exports and petrochemicals, but we will try our best to produce and export oil and petrochemical products." "It would be very significant and strategic for us to be able to move the bulk of Iran's oil sales from Kharg (Persian Gulf) to Jask (Oman Sea)," he said, expressing hope that the project would begin this year.

### Petchem Output at 54mt

Iran's Minister of Petroleum Bijan Zangeneh said in the inaugural that since the first Rouhani administration, the Ilam Petrochemical Plant, Lorestan Petrochemical Plant, Urmia Sulfuric Acid Plant, Mahabad Petrochemical Plant, Shiraz Urea and Ammonia Plant, Kurdistan Petrochemical Plant, Karoun

Petrochemical Plant, PBR and SBR units and come on-stream. "The products by these units, excluding the three [newly-launched] projects, are valued at \$3.5 billion," he said. Zangeneh said \$1.85 billion had been invested in the three projects inaugurated by President Rouhani. He said the products of Pardis urea and ammonia and Marjan methanol plants were valued at \$834 million. The Pardis plant has capacity to produce 1.755 mt/y of urea and ammonia, while the Marjan plant has capacity to produce 1.65 mt/y of methanol. Zangeneh said the Morvarid, Kavian and Entekhab petrochemical plants plus Takht-e Jamshid Pars Polystyrene Plant, which had become operational during his tenure of office, had capacity to produce 2 mt/y, which would be worth \$4.359 million. He said Iran's petrochemical industry had seen major developments in recent years. "Owing to increased delivery of feedstock to petrochemical plants, the output of these units increased \$5.4 billion in value," he added. Zangeneh said Iran's petrochemical output had increased from 42.5 mt/y in 2013 to 54 mt/y now. Gas delivery to power plants had increased from 38 mcm/d in 2013 to 51 mcm/d in 2017.

### Ethane Output Capacity Doubles

Zangeneh referred to the production of ethane as the most important base for petrochemical products in recent years. He said Iran's ethane output had jumped from 3.8 mt/y in 2013 to 6.11 mt/y in 2017, which is forecast to hit 8 mt/y this year. Each tonne of ethane rivals at least \$1,000 in exports, he said, adding that Iran's ethane production would reach 12.75 mt/y in 2019 and 17.6 mt/y in 2020. Zangeneh said the Bidboland gas refinery project in the Persian Gulf was expected to produce ethane. "This project, which is receiving 2 bcf of gas from Khuzestan Province as feedstock, is to come online next year," he added. Zangeneh said the Parsian ethane recovery plant, NGL 3200 in West Karoun, NGL 3100 in Ilam and Kharg NGL were other ethane production units. He added that an ethane production plant would come online in the southern city of Bushehr. According to the minister, the Kaveh methanol plant, Phase I of Bushehr Petrochemical Plant, Ilam Petrochemical Olefin Plant, Sabalan Methanol Plant, Lordegan Chemical Fertilizer Plant, Miandoab Petrochemical Plant and Bushehr SPR were among other important projects whose output is valued at



This project, which is receiving 2 bcf of gas from Khuzestan Province as feedstock, is to come online next year

more than \$2.5 billion. “The total investment made in these projects stands at \$4 billion in the first phase,” said Zangeneh.

#### 480,000b/d Condensate Processing

Zangeneh referred to the Siraf refineries as a project completing Iran’s petrochemical chain, saying the facilities had capacity to treat 480,000 b/d of gas condensate. He expressed hope that the Siraf project would come online before the Rouhani administration would end its current term in office. He said the National Development Fund of Iran would be tapped for the completion of the Siraf project, adding that the entire condensate produced in the country would be consumed domestically.

#### No Flaring in Khuzestan

Zangeneh said the two agreements signed for flare gas gathering plan would result in zero flaring in the provinces of Khuzestan and Kohgiluyeh Boyer Ahmad. He said that the two buyback agreements were set to prevent the flaring of 22 mcm/d of gas in order to convert it to feedstock for petrochemical plants. He put the value of these agreements at \$1,216 million, adding that GPGIC and MPC were required to implement the projects over the coming 2 ½ years. Zangeneh said GPGIC and MPC would recoup their investment via extra feedstock supply to the plants.

#### Pardis, Largest Urea Producer

With the inauguration of its Phase III, the Pardis Petrochemical Plant would become the largest producer of urea and ammonia in the Middle East with an annual output of 5.265 mt. The urea and ammonia project has cost €502 million, provided by revenue



projects worth \$1.2 billion for the purpose of preventing the flaring of 22 mcm/d (760 mcf/d) of flare gas in the eastern part of Karoun River. The projects are expected to come online in 2 ½ years. Once all these 32 projects have been implemented, 510 mcf/d of extra feedstock would be supplied to the Bidboland-2 petrochemical plant, currently under construction, and an extra 250 mcf/d of feedstock to the MPC. The planned flare gas gathering will increase NISOC gas condensate production by 38,000 b/d, which would increase feedstock supply to the Bandar Imam Petrochemical Plant. Therefore, a total of 1.6 mt/y of ethane and heavier gas compounds, as well as 14 mb/y of gas condensate would be added to feedstock supply to petrochemical plants. That would constitute a big step in making up for feedstock shortage in petrochemical plants across the country. This volume of feedstock is valued at \$1,300 million a year for National Iranian Oil Company (NIOC). The petrochemical production from extra feedstock supply at these projects is estimated at \$2,600 million per annum. These projects will also provide NIOC with 16 mcm/d of light natural gas. Flare gas gathering will help improve environmental conditions in oil and gas production areas and gauge the petroleum industry’s commitment to sustainable development and implementation of resilient economy policies. This issue has been insisted upon by President Rouhani. To that end, NIOC has signed agreements with domestic petrochemical companies demanding feedstock. Implementation of these agreements will accelerate flare gas gathering and improve feedstock supply to petrochemical plants.

The annual production of the three phases of this petrochemical plant totals 2.04 mt of ammonia plus 3.225 mt of urea

from Phase I and Phase II of the Pardis Petrochemical Plant. The sum was spent on utility sections including two boilers, each with capacity of 150 tonnes per hour; water reservoir development and DM water production unit with capacity of 300 cubic meters per hour. The ammonia section of Phase III of the Pardis plant has produced 327,000 tonnes of ammonia since last November. Over this period, the urea section of the plant has produced 401,000 tonnes which would soon reach 522,000 tonnes. Hossein Shahryari, CEO of Pardis Petrochemical Plant, said: “The annual production of the three phases of this petrochemical plant totals 2.04 mt of ammonia plus 3.225 mt of urea.” He added that 700,000 tonnes of urea would be supplied on domestic market and be used in the agriculture sector, while 2.5 mt would be exported to Europe, Argentina, Brazil and South America. Shahryari said Phase III of the Pardis plant had capacity to produce 1.755 mt/y of urea and ammonia, of which 1.15 mt would be exported for

\$257 million.

#### Marjan Methanol Starts Commercial Output

The Marjan Petrochemical Plant has capacity to produce 1.65 mt/y of methanol. Since Phases II and III of the Damavand Petrochemical Plant were not ready, the oxygen generation section of the Marjan plant came online this year in order to provide logistics services.

The Damavand petrochemical plant is operator of utility facilities and off-site services in Phases III of petrochemical projects in the Pars Special Economic Energy Zone (PSEEZ). The utilities of petrochemical plants in Phase II of Assaluyeh, just like Phase I, were supposed to be provided in an integrated manner, but due to the protracted privatization of the Damavand project, the Marjan petrochemical plant changed strategy and moved to produce the ASU unit for oxygen production in a bid to save time.

#### 1,900MW Power Generation

Phase I of the power plant of

the Damavand Petrochemical Plant has capacity to generate 1,900MW of electricity. It comprises 12 turbines and a steam unit. In the meantime, GIS installations and electricity transmission posts became operational to allow for the supply of power to PSEEZ projects and those expected to come online in the future.

Mohammad-Reza Samiei, CEO of the Damavand plant, said the plant was responsible for utilities in 14 petrochemical projects in Phase II of Assaluyeh. “Once the three phases of this project have become operational, 2,000MW of electricity, 400,000 cubic meters of industrial water plus 650,000 cubic meters of oxygen for the methanol unit, 1,890 tonnes of steam and the waste collection unit would be put at the disposal of petrochemical units,” he said. Phase I of this project, he said, would involve generating 648MW of electricity and 780 tonnes of steam, adding that Phase I had cost €305 million.

Regarding exchange of power, he said there were three options for that purpose. “One of these

options is the 100MW with the Mobin Petrochemical Plant, a second one is being linked to the 132-kilovolt network and the third option is getting connected to national power grid which is now 60% complete,” he added. Regarding exchange of gas and steam between the two utility providers for the Assaluyeh petrochemical plants, he said: “We will exchange about 300,000 cubic meters of gas with the Mobin petrochemical plant via pipeline. We are already supplying 60 tonnes of steam to Phase I of the Mobin plant. The oxygen and nitrogen line will be between the Damavand and Mobin petrochemical plants.”

#### NISOC Flare Gas Gathering

NISOC’s flare gas gathering projects were signed between CEO of NISOC Bijan Alipour on one side and GPGIC CEO Jafar Rabiei and MPC CEO Abdol-Majid Mohammadi on the other. The agreements are aimed at revitalization and renovation of flare gas gathering facilities in Khuzestan Province. The agreements involve a total of 32

The petrochemical production from extra feedstock supply at these projects is estimated at \$2,600 million per annum. These projects will also provide NIOC with 16 mcm/d of light natural gas

## Big Transport Fuel Use Reduction Possible

The manager of “transportation sector Dept.” at Iran Fuel Conservation Organization (IFCO) has said that 2.3 out of 16 million light vehicles in Iran had to be phased out, and in this way 35 million barrels of oil equivalent per annum may be saved in the transportation sector.

“Energy intensity is very high in the country, and in general consumption of energy carriers including gasoline is very higher” said Sasan Kazeminejad. He added that 258 million barrels of oil equivalent was being consumed annually in the transportation sector. “In the transportation sector, the

highest consumption level goes to gasoline, petroleum and gas, respectively” he added.

He said that 65,000 trailer trucks, 17,000 buses and 140,000 taxis had to be phased out while transportation networks in Tehran and eight mega

cities had to be developed. Furthermore, he added, low-consumption automotive systems need to be designed and manufactured.

“If such projects as the replacement of 140,000 worn-out taxis are implemented, necessary motivation will be created

for investment. At the same time, gasoline consumption will decline significantly,” said Kazeminejad. “But as long as clapped-out cars are active and no measure is taken to renovate the transportation fleet, our gasoline, petroleum and gas consumption will keep rising.”

## NISOC Conducts 164 Research Projects

National Iranian South Oil Company (NISOC) has so far conducted 164 research projects, the head of NISOC R&D Department said. “Since the establishment of R&D Department of NISOC, 164 research projects have been signed and implemented,” Baqer Pour-Qasem said. He added that some of them were aimed at the manufacturing of commodities and equipment for commercialization. Pour-Qasem cited the most important projects, referring to the manufacturing of T-4502 gas turbine, manufacturing of toothed drilling bit by applying modern technology, production of drilling cement additives and production of light and ultralight cement slurry for cementing in 10 wells in Maroun. “Nine projects are ready for commercialization. Domestic companies affiliated with the petroleum industry may refer to NISOC for the development of products of these projects,” he said.

## Energy Technology Center Poised to Be Launched

The secretary of the Energy Technology Development Council of the Office of Vice-President for Science and Technology has announced the imminent launch of Iran’s first Energy Technology Center. “Financed by the Council and the private sector, this Center will be launched soon so that all startups, seed accelerators and knowledge-based companies in the energy sector would work in an integral manner,” Kambiz Mehdizadeh said. He added that the inauguration of the technology center would be a step for arranging activities in the energy sector. “This Center provides a venue for the development of energy-related innovations so that companies involved there could offer their ideas and capabilities in this sector,” he said. Mehdizadeh said that private startups and accelerators have voiced readiness for financing the technology center and that necessary infrastructure is ready.

## NIDC Eyes Iraq Projects

National Iranian Drilling Company (NIDC) is scrutinizing proposals presented by the Italian giant oil company Eni, as well as Russia’s Lukoil to undertake drilling projects in Iraq. Karam Ali Naderi, NIDC’s marketing manager, made the statement on the sidelines of a ceremony to sign a memorandum of understanding with a domestic Iraqi drilling company in Ahvaz, aimed at conducting drilling and overhaul operations in Basra and Zubair oilfields, Shana reported. “Eni and Lukoil have won tenders to implement drilling operations in Iraq,” he said, noting that NIDC has received proposals to join after selecting an Iraqi business partner. Over the past one year, NIDC has drilled and completed 156 offshore and onshore wells with a total depth of 221,065 meters. Drilling has been conducted by reliance on local technical knowhow and maximum use of domestically manufactured equipment.

## Total Quits South Pars Gas Project

Iran’s Minister of Petroleum Bijan Zangeneh announced French energy major Total had officially left Iran due to the threat of secondary sanctions from the United States. “Total officially quit the South Pars Phase 11 development contract,” Zangeneh said. He added that arrangements were under way for replacing Total with another company. Total also said it had notified the Iranian authorities of its withdrawal from the multi-billion-dollar South Pars gas project after it failed to obtain a waiver from US sanctions. “The contractual process is ongoing,” Total said in an emailed statement. “As for the future of Total’s share, we have not been informed of an official CNPC position, but as we have always said, CNPC, a Chinese state-owned company, has the right to resume our participation if it decides so,” Total added.

## Iran Gasoline Unsanctionable

Iran’s First Vice President Es’haq Jahangiri has said that imposing gasoline restrictions on Iran will be ineffective due to national production. “After the startup of the Persian Gulf Star refinery, the bulk of Iran’s gasoline needs is supplied by reliance on domestic capabilities, stripping enemies of a chance to pile up pressure on Iran through restricting gasoline [delivery to Iran],” he said. Jahangiri said domestically produced gasoline is of high quality, adding: “The

quality of gasoline produced in Iran complies with global standards and it no longer causes pollution and environmental impacts which were caused by petrochemicals-based gasoline produced” under the administration of former president Mahmoud Ahmadinejad. Jahangiri said “key sections” in Iran need to be safeguarded effectively as the country is coming under sanctions. He said that the oil price slump in 2015 motivated Iran

to make its economy “resilient”. “Now that we are faced with US unilateral sanctions, we have to act under the aegis of economic resilience in a bid to tackle sanctions,” said Jahangiri. He said that implementation of such projects as the Persian Gulf Star refinery had boosted Iran’s economic resilience.

### Euro-5 Gasoil Up

Ali-Reza Sadeq-Abadi, CEO of National Iranian Oil Refining and Distribution Company (NIORDC), said that Iran



had increased its Euro-5 gasoil production thanks

to insistence by Minister of Petroleum Bijan Zangeneh

on honoring civil rights and environmental principles. He said that upgrading the quality of gasoil produced at Tabriz, Isfahan and Bandar Abbas refineries was a major achievement of the current administration. “Soon, we will see startup of projects to enhance the quality and quantity of Euro-5 gasoil at the Tabriz and Bandar Abbas refineries,” said Sadeq-Abadi. He said the Tabriz refinery was producing 6 ml/d of Euro-5 gasoil, the Isfahan refinery 16 ml/d and the Bandar Abbas refinery 12 ml/d.

## Spanish Company to Continue Business with Iran

Esproenko International, which specializes in oil and gas services, has in an interview with Russia's Sputnik commented on the situation around the first phase of Washington's anti-Iranian sanctions which entered into force on August 7. Esproenko International's PR manager Carlos Toledo explained that the company had started working with Iran in 2013, "when sanctions on the Islamic Republic were imposed by all sides, namely, the European Union and the United States." "We had no competition on the Iranian territory [at the time], which prompted us to enter this market," he pointed out.

However, he added, the company had to face "huge competition" in 2015 and minimize its activities when the anti-Iranian sanctions were lifted. Now that Washington has tried to stifle the Iranian economy and has warned European and US companies against conducting trade with Tehran, Esproenko International perceives all this as a new opportunity, according to Toledo.

"Now we are considering the resumption of activities at a higher level. So far, the EU has not adopted any sanctions against Iran. And what the US is saying is its own problem, not ours," Toledo said. He added that the company had not received any threats, and even if it did, it would have ignored them.

## Iran Petchem Reliant on Domestic Potential

A senior official at National Petrochemical Company (NPC) has said that petrochemical industry development has always relied on domestic capabilities.

"In cooperation with petrochemical companies we always try to identify potential challenges," said Farnaz Alavi, who is director of planning and development at NPC.

She added that future petrochemical industry plans needed to be formulated in coordination with other organs and bodies for companies to follow their logical approach.

"We intend to adopt approaches in the run-up to the [second wave of] US sanctions in November and if the European Union acts more transparently and the level of petrochemical cooperation with European companies in banking and insurance is determined, we could make plans for actions to follow," said Alavi.

She said that NPC was seeking sustainable production and completion of development projects in cooperation with holdings and petrochemical companies.

"We will benefit from the experience we achieved during past sanctions," she said. Hossein Mir-Afzali, CEO of Jam Petrochemical Company, said every month one project would come online in the plant by March.

## OPEC Resolution 'Arbitrary' Interpretation Unfavorable

Iran's Minister of Petroleum Bijan Zangeneh has warned against "arbitrary interpretation" of the last resolution adopted by OPEC to satisfy the United States. "Some OPEC members have their arbitrary interpretation of the recent OPEC resolution, which is an incorrect move," Zangeneh said. OPEC and its allies will review the monitoring mechanisms of its output agreement at the Joint Ministerial Monitoring Committee (JMMC) meeting in Algiers on September 23 but said it sees the current oil market as largely balanced. The JMMC, which is responsible for closely monitoring the market and recommending appropriate response measures, said in a statement that in Algiers "it will review the plan for monitoring overall market fundamentals and conformity levels for the remainder of 2018, as well as the framework of cooperation to be established in 2019 and beyond.

The JMMC said it was satisfied that recent market fundamentals showed a "good balance between supply and demand considering seasonal factors. "Conformity levels of the participating countries was 109% in July compared to 121% in June, but still higher than what the alliance had agreed to at its meeting in late June, the statement said.

## Japan Firm on Seeking US Iran Oil Waiver

The Japan remains firmly committed to seeking U.S. exemption for Iranian oil imports as it sees the supplies as important for the country's energy security and businesses, a top government official told S&P Global Platts.

"Japan's position remains firm even after the second round of talks [with the U.S. government]," Ryo Minami, the director-general of oil, gas and mineral resources at the Ministry of Economy, Trade and Industry said in an interview.

"Our basic principle is to seek an exemption [from the U.S.]," Minami said. Asked whether Japan was also looking to reduce its Iranian oil imports in order to secure U.S. sanction waivers, Minami declined to comment.

Japan and the U.S. held a second round of talks on the U.S.' Iran sanctions in Washington over August 1-2, when the two sides agreed to continue bilateral discussions.

"During the second round of talks Japan clearly explained its position to continue [Iranian oil] imports to the U.S. in an effort to gain their understanding," Minami said. "Looking forward, we will inevitably have to hold talks with the U.S. government solidly to obtain their understanding," he said. "From the Japanese perspective, we see the import of Iranian crude oil as necessary to continue Japan's energy security, as well as considering the impact on Japanese companies."

## SP14 2nd Platform Ready for Operation

The manager of South Pars Phase 14 development project has said that Platform 14C would be ready to come online in October.

"After the installation of satellite Platform 14C on its Persian Gulf location, pre-commissioning and commissioning operations started. In case of favorable weather conditions this platform will be ready" to come online in October, Hamid-Reza Masoudi said.

He added that Platform 14C weighs 2,200 tonnes and is

fitted with 53 fixed, rotary and packed equipment. The platform required 35,000 inches of welding and 60,000 meters of electric cable extension.

Masoudi said that sour gas recovery started from the first platform of SP14 in May, adding that Platform 14A is in full operation by delivering sour gas to Phase 12.

SP14 came on-stream after the development of Phase 19 and Phases 20-21.

He said that seven wells Platform 14C were ready and

that 500 mcf/d of sour gas had been recovered after the satellite platform installation.

The gas production capacity of SP14 has increased to 1bcf/d.

### Platform 14B 88% Complete

Masoudi said Platform 14B was 88% complete. It is under construction at ISOICO yard.

He said 14B was expected to be loaded out and installed in October.

Noting that drilling of 11 offshore wells in this platform was in the final stage, Masoudi said completion of seven wells

and installation of Platform 14B would allow the recovery of 1.5 bcf/d of gas from SP14.

### Order Placed for SP14 Equipment

Masoudi referred to the refining section of SP14 and said that development work for the project had been put on the right track both onshore and offshore after the client and the contractor were restructured.

"The stagnation caused in the previous years has been compensated for to a large extent. Hopefully all necessary commodities have been supplied to the refinery," he



said.

Masoudi said that efforts were under way for benefiting from the existing processing

capacity of the refinery of SP14 in parallel with the completion of the offshore section of this phase.

## Sustainable Oil & Gas Recovery from Joint Fields

Iran's oil production has experienced ups and downs over the past one decade. During certain periods, the country has seen its oil output fall, but it has been short-lived as Iran has raised its crude oil production. For instance, in 2006, Iran's oil output had exceeded 4 mb/d, which was cut by 1 mb/d in 2014 under tough international sanctions. Following the implementation of Iran's nuclear deal with six world powers, Iran's oil production started rising anew. Iran was producing 3.72 mb/d in 2016 and 3.85 mb/d the following year. Iran's 2017 oil production level reached that of 2011. Despite pressure by US President Donald Trump on buyers of Iran's oil, the country's oil and gas production is racing ahead and Iran's petroleum industry is undertaking plans to raise production.

South Azadegan, Yadavaran, North Yaran and South Yaran oil fields) reached 350,000 b/d, up from 275,000 b/d in September 2016

Increasing oil recovery from jointly owned fields has been a top priority of National Iranian Oil Company (NIOC) under President Hassan Rouhani's administration. After Bijan Zangeneh took office as minister of petroleum, development of shared oil fields picked up speed. By March 2018, crude oil production capacity in the West Karoun area (North Azadegan, South Azadegan, Yadavaran, North Yaran and South Yaran oil fields) reached 350,000 b/d, up from 275,000 b/d in September 2016. In addition to West Karoun fields, Azar oil field (shared by Iran and Iraq) has been producing at 30,000 b/d. Azar is among tight fields in terms

of oil recovery, but Iranian contractors managed to make this field operational without any assistance from foreign companies.

### NISOC Output at 3 mb/d

Among NIOC subsidiaries, National Iranian South Oil Company (NISOC) is very important as it accounts for 83% of Iran's oil production and 16% of Iran's gas production. Over the past one year, NISOC has been sustainably supplying 3 mb/d of oil. Since NISOC-run oil fields are ageing, the company is pushing ahead with development plans in order to sustain the oil flow. Contracts have also been signed with domestic contractors over the past one year, including with

MAPNA for the development of Parsi and Paranj fields. Parsi and Paranj are under gas injection. Once developed, their losses would be offset while they would see their output increase 30,000 to 40,000 b/d. Furthermore, the first non-disclosure EPC/D agreement was signed between NISOC and Petro Gohar Fara Sahel Kish Co. on the supply and installation of wellhead and downhole pumps, drilling and workover of six wells, necessary repairation in production and desalting units, installation and repair of turbines.

### South Pars Gas Output at 570 mcm/d

The significance of development of the giant

offshore South Pars gas field is no secret to anyone. Over the past five years, Iran's Petroleum Ministry has brought South Pars output from 282 mcm/d to the current 570 mcm/d. NIOC divided South Pars into 24 phases for development. Except for Phase 11, other phases would have been developed by 2019. In the current calendar year, SP13, SP14 and SP 22-24 would reach their final stage with their refineries to come online in 2019.

### SP13 Gas Processing at 9mcm

The contract for Phase 13 development was signed in 2010. The project has been

accelerated in the past 1 ½ years. Two sweetening trains of the refinery are now operational. After reaching full capacity, the treatment facility would sweeten 28.2 mcm/d of gas for injection into national network. The first train came online last March and is now processing 9 mcm/d of gas. The second train which became operational in late May is now processing more than 7 mcm/d of gas. SP13 development is set to produce 56.6 mcm/d of rich gas, 75,000 b/d of gas condensate, 400 tonnes per day of sulfur and 1.05 million tonnes a year of liquefied petroleum gas (LPG) plus 1 million tonnes a year of ethane.

### SP14 Offshore Section

SP14 has been developed to produce 56.6 mcm/d of sour gas, 75,000 b/d of gas condensate, 1 million tonnes a year of LPG, 1 million tonnes a year of ethane for petrochemical plants, and 400 tonnes a day of sulfur. The refinery of this phase is expected to come online by March 2020. The first sweetening train of SP14 refinery is coming online in 2019 and the offshore section is set to come on-stream by next March. Platform 14A with a capacity of 14.1 mcm has been built by ISOCIO at Bandar Abbas industrial yard. It was installed and launched last May. Platform 14C is set to be installed soon. Construction of platforms 14B and 14D at ISOICO yard is under way. They are expected to be installed in their Persian Gulf location by next March.

### SP22-24 Development

SP22 and SP23 & 24 are expected to see important events in September. The offshore platform of SP22 was

installed in June. As offshore drilling is nearly over and CRA pipes are to be installed, SP22 is expected to become operational in November.

The offshore topside of 24A is to come online in September before being loaded out from SADRA industrial yard in Bushehr at the destination of its Persian Gulf location.

The first sweetening train of SP 22-24 refinery was launched last March to receive sour gas from South Pars gas field. Sweet gas production from this processing unit began last June. It is currently receiving sour gas from SP6, SP7 and SP8 to feed more than 7 mcm/d of sweet gas to Iran Gas Trunkline 6 (IGAT6).

### NIDC Completes 154 Wells

National Iranian Drilling Company (NIDC) has spudded and completed 154 wells since 2017. They include 66 development wells, 4 appraisal wells, one exploration well and 83 workover wells. Over the same period, NIDC has accomplished 7,885 missions with regard to drilling services, including cementing management, well stimulation and technical services. For the first time, NIDC has carried out oil production maintenance and enhancement projects through offering integrated technical and engineering services without drilling rigs.

The first such project was carried out in the South Azadegan oil field through partnership between NIDC and Petroleum Engineering and Development Company (PEDEC). This project is aimed at the reclamation of 50 wells in this field. Through turnkey projects, NIDC has drilled 40 wells in the South Azadegan field. It is now drilling 20 more wells in this field which is shared by Iran and Iraq.

NIDC has accomplished 7,885 missions with regard to drilling services, including cementing management, well stimulation and technical services

# Power Plants Fed 70bcm Gas in 1 Year

Gas has grown into a vital product in the energy mix of world nations. Experts believe that the share of gas, a clean source of fuel, in the energy mix is set to rise significantly in coming years. Iran holds more than 18% of global reserves thanks to its natural gas deposits currently estimated 34 tcm. Therefore, it is among nations with the chance to become an influential supplier of this source of energy. In addition to following up on plans for exporting gas to neighboring countries, the Iranian Ministry of Petroleum has expanded national gas distribution network and gas trunklines in a bid to save on middle distillate products and liquid fuel. Over the past one year, 70 bcm of gas has been delivered to power plants across Iran, largely contributing to air pollution control.

Ever since National Iranian Gas Company (NIGC) was established until 2013, a total of 12,000 villages had been connected to national gas grid. But during the four-year in office of the 11th administration (2013-2017) alone, more than 9,000 villages were connected to the gas distribution network.

The first administration of President Hassan Rouhani benefited from modern financing and investment methods to remove obstacles. That continued with the private sector involvement under the 12th administration.

As the 12th administration took office, villages with more than 20 households were identified and in the last calendar year to March 29 18, 29 towns and 2,643 villages were connected to the national gas grid. In the current calendar year,

5,250 villages and 50 towns are in the

line to be connected to the gas distribution network. By next March, which marks the turn of Iranian calendar year, 3,600 villages would have been connected to gas network. By then, 97% of Iranian cities and 83% of Iranian villages will have been connected to national gas grid.

#### Sustainable Gas Supply

In the last calendar year, more than 190 bcm of gas was distributed on a sustainable basis between 22.3 million consumers in the household, commercial and industrial sectors.

As part of plans to safeguard the environment and to prevent the consumption of liquid fuels, 70 bcm was supplied to power plants.

Among other major activities carried out by NIGC in the last calendar year were installing upgraded gas meters to apply hourly, daily and seasonally adjusted tariffs at power plants, CNG stations and industries, and monitoring gas consumption in order to prevent gas waste.

#### 1,000km Gas Pipeline

In coincidence with the development of

South Pars gas field under the 11th and 12th administrations for enhanced gas recovery from the giant reservoir, which Iran shares with Qatar, necessary infrastructure for processing, transmission and distribution of gas was provided.

The most important development plans in the last and current calendar years have been the startup of Iran Gas Trunkline 6 (IGAT6) and acceleration of activity for the operation of IGAT9.

In the last calendar year, a total of 1,000 kilometers of gas pipeline were installed. This year too, 1,000 kilometers are to be laid out.

#### Gas Compressors

Compressors are the beating heart of gas industry. In this regard, NIGC operated Khour Moj and Ab Pakhsh gas compression facilities with a capacity of 100MW at IGAT6, and Khorramdareh, Qazvin, Neyzar, Semnan and Parchin facilities with a capacity of 125MW in the last calendar year. In the current calendar year, the remaining facilities at IGAT6 are to become operational.

In addition to gas trunklines and gas compressors, refinery projects including South Pars metering at the 1st, 2nd, 3rd and 5th refineries, and mercaptan production unit with 800 tonnes of capacity have become operational over the past one year. Installation of 2,375 kilometers of telecommunications lines and fiber optics and startup of operation centers in Kerman and Khorramabad are among other NIGC projects for the current calendar year.

# Gasoline Production Up in Iran

- Gasoline remains a strategic product in Iran.
- Not long ago, gasoline consumption outweighed its production in Iran, playing well into US hands to pressure the country.

After President Hassan Rouhani took office in 2013, the Ministry of Petroleum formulated plans to upgrade gasoline production at refineries. In the meantime, the startup of the Bandar Abbas Condensate Refinery (operated by the Persian Gulf Star Oil Refinery) increased gasoline production in Iran and rendered gasoline sanctions ineffective.

Over the past one year, implementation of projects to boost gasoline production both quantitatively and qualitatively at Iranian refineries, inauguration of gasoline production project at the Bandar Abbas oil refinery, inauguration of gasoline production facilities at the Lavan and Isfahan oil refineries, and green gasoline production unit at the Abadan oil refinery are among other projects which have contributed to gasoline production hike in Iran. These projects helped Iran increase its gasoline production more than 50% year-on-year. However, that is not the end of the story. As the Persian Gulf Star refinery becomes more complete, Iran's gasoline keeps improving in terms of both quantity and quality.

## Largest Gas Condensate Refiner

The Bandar Abbas Gas Condensate Refinery, known as Persian Gulf Star, is the largest gas condensate processing facility and also the largest Euro-5 gasoline producer in the world. It is spread on 230 ha of land west of the city of Bandar Abbas in southern Iran. Phase 1 of this refinery came

online in May 2017 with an output of 12 ml/d of Euro-5 gasoline, 4.5 ml/d of gasoil, 1 m/d of kerosene and 1.3 ml/d of liquefied petroleum gas (LPG). Gasoline production from Phase 2 of the refinery started last March; Euro-5 gasoline production currently stands at 24 ml/d and gasoil output has reached 8 ml/d.

Ali-Reza Sadeq-Abadi, CEO of National Iranian Oil Refining and Distribution Company (NIORDC), said Phase 3 of the refinery will supply 30 ml/d of gasoline, which would bring Iran's gasoline output to 107 ml/d.

## Abadan Gasoline Output Hits Target

The ground was broken for the Abadan oil refinery in 1910. Two years later, the facility started treating 2,500 b/d of oil. The refinery has since

witnessed ups and downs. The refinery has been developed in three phases. In Phase 1, the capacity of distillation unit 85 increased from 130,000 to 180,000 b/d, while the vacuum distillation unit with a capacity of 70,000 b/d and the viscosity reduction unit with a capacity of 25,000 b/d for reducing fuel oil output and feeding the catalytic cracking unit came on-stream in 2005. In Phase 2, the idea was to stabilize the current production capacity and to upgrade the quality of refined petroleum products. In this phase, distillation units, gasoline, kerosene and gasoline treatment units, sulfur production units, and a second catalytic cracking plant will be established. Phase 3 involves construction of catalytic cracking and alkylation plant, butane isomerization and acid unit renovation. That is aimed at increasing gasoline production and reducing fuel oil output. This project will help increase gasoline production 6 ml/d.

In future development projects for this refinery, addressing environmental concerns is of high significance. A variety of filters and scrubbers will be

used to prevent air pollution, treat industrial waste and operate the closed circuit system of coolers. Owing to the use of new technology in such units, energy wastes will be reduced to minimum. After establishment of industrial waste treatment unit, water pollution at Arvandroud River will be eliminated. The Abadan refinery output has increased from less than 10 ml/d to 12 ml/d. To that end, two sections of the refinery that had remained non-operational for four years were restarted. The refinery is expected to upgrade the quality of its total output to Euro-4 grade. The Abadan refinery is delivering more than 12 ml/d of gasoline to the National Iranian Oil Products Distribution Company (NIOPDC).

## Arak Refinery Output Up

Imam Khomeini Oil Refining Company (Arak oil refinery) produces Euro-4 gasoline. It is the largest single-unit refining facility in Iran. It began work in 1993 with a rated capacity of 150,000 b/d. The Arak refinery is also the first treatment facility whose feasibility studies began after the 1979 Islamic Revolution. The refinery capacity was raised to 170,000 b/d shortly.

Switch from middle distillate petroleum products to gasoline and an upgrade in the quality of products to comply with environmental obligations and international standards prompted authorities to adopt a plan for increasing the output and upgrading the quality of refined petroleum products at the refinery.

# Annual Petchem Output at 54mt

Annually adjusted data released for petrochemical production and exports in Iran indicates growth in this profitable sectors. Iran produced 54 million tonnes of petrochemical products in the Iranian calendar year to March 2018, which proves growth in the sales and export of these strategic products on an annual basis.

The rated petrochemical industry production capacity was estimated at 63 million tonnes for a one-year period ending in August 2017. The figure is registered at 64 million tonnes for the one-year period ending in August 2018. Petrochemical production for the two mentioned periods was 51.6 million tonnes and 53.8 million tonnes, respectively.

#### 123 Petchem Items

A review of diversity in petrochemical production shows that 115 items of petrochemical products were manufactured in Iran during a one-year

period up to August 2017. The number of items grew to 123 over the one-year period.

#### Petrochemical Export Growth

Iran exported 21.05 million tonnes of petrochemical products over one-year starting in August 2016. The export levels hit 22.21 million tonnes for the one-year to follow. Furthermore, the value of exported petrochemical products was recorded at \$10.43 billion and \$12.67 billion for the two periods under review.

#### Petchem Sales at \$18bn

Net sales of petrochemical products reached 28.82 million tonnes, yielding \$15.26 billion in revenue during the one-year period ending in August 2017.

Petrochemical sales were registered at 30.26 million tonnes, earning the country \$18.48 billion in revenue during the following one-year period.

In the meantime, domestic sales of petrochemicals were recorded at 7.77

million tonnes and 8.05 million tonnes respectively for the foregoing one-year periods. That yielded respectively \$4.83 million and \$5.81 billion.

#### Value Chain Completion

Development of downstream petrochemical industry is of high significance in Iran due to its role in eradication of poverty, creation of jobs, generation of value-added as well as completion of value chain. That is why much focus has been on the petrochemical industry development in recent years. Compared with upstream and midstream industries, downstream sector needs a lower amount of investment with a shorter return on investment.

The downstream petrochemical chapter in Iran's 6th Five-Year Economic Development Plan is based on the continuation of schemes incorporated in the 5th Development Plan for the petrochemical industry, the strategy of National Petrochemical Company (NPC), completion of value chain and generation of more value-added.

#### 2 Petchem Plants Ready for Operation

Two petrochemical plants in Iran are now ready for inauguration. One of them is Pardis 3 Petrochemical Plant, which reached production stage last year. It is one of the largest producers of ammoniac and urea in the Middle

East and the world. Its construction is within the framework of national development plans in the oil, gas and petrochemical sectors and also within the framework of measures undertaken by NPC for the development of the Pars Special Economic Energy Zone (PSEEZ). The other one is Marjan Petrochemical Plant with a production capacity of 5,000 tonnes a day in Phase 2 of PSEEZ in Assaluyeh in the southern Bushehr Province.

Marjan plant, whose annual production capacity stands at 1.6 million tonnes, is owned by Novin Social Security Investment Company (67%), Tamin Oil, Gas and Petrochemical Investment Company (17%) and Fanavaran Petrochemical Company (16%).

# 2017 Petroleum Events 2018

March 2017-September 2017

Iran's South Pars output is equal to that of Qatar's portion owing to SP17, 18, 19, 20&21 startup

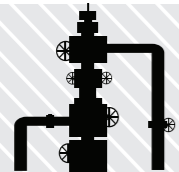


Oil production from South Pars Oil Layer



Oil production capacity increase in jointly owned South Azadegan and Azar fields

Signing of an agreement with Iranian-Spanish consortium for CRA pipe manufacturing



Signing of an IPC-style agreement with Total-led consortium for SP11 development



Petroleum Minister's instructions for renovation of NIOC ground installations

Signing of an agreement for renovation of 2,100 clapped-out trucks and trailers



Signing of an agreement with Franco-Iranian consortium for flare gas gathering at SP2, 3 refineries



October 2017  
March 2018

Starting oil production from South Yaran oil field

Signing of an agreement with Italy's Ansaldo for flare gas gathering to generate electricity and renovate oil and gas equipment

Signing of an agreement with Iranian company to complete Kharg NGL project

Containing Well 147 Blowout at Rag Sefid

Setting new record in berthing oil tankers and loading gas condensate from South Pars SPM

Launch of IFCO Azma system for effective communications between fuel consumption standards

Signing of five research agreements between NIOC and five top universities on exploration

Startup of Hengam Gas Processing Plant

Signing of agreement for development of Aban and West Paydar fields between NIOC and Iranian-Russian consortium (Zarubezhneft and Dana Energy)

Signing of an agreement for development of Sepehr and Jofair fields between NIOC and Pasargad Energy Development Company

## Petroleum Industry's Major Activities since March 2017



March 2018-September 2018

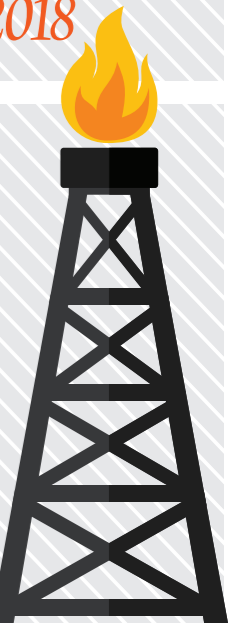
Awarding of North Azadegan oil field production



Startup of Azadegan Plain 128-bed hospital in Susangerd

128

Launch of Parsi flare gas gathering station



Petroleum Minister's instructions for improvement of temporary employees' conditions



Signing of documents of cooperation between Iran and Republic of Azerbaijan for joint recovery from Caspian Sea hydrocarbon reserves

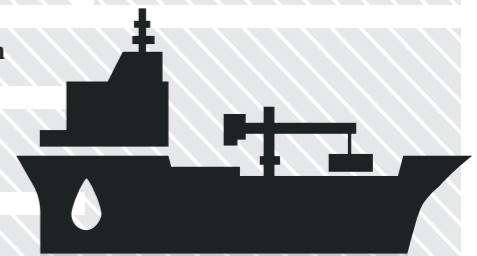


Signing of agreement between NISOC and Pergas consortium for development of Karanj

Domestic manufacturing and installation of first SRP down-hole pump in Ab Teymour well

First Parsi crude oil shipment from Bahregan

Iran's increased oil sales and oil revenue growth in four months



Ban on purchase of 84 foreign items whose similar prototypes are manufactured in the country

6,000,000,000 \$

Drawing up \$6bn package for maintenance and production enhancement

14,000,000

The beginning of daily gas production (14 mcm) in the first stage of the South Pars Phase 14

# Upstream Oil Activities Set to Grow



The contractor work potential in the petroleum industry has taken shape throughout years and we have to appreciate such potential and safeguard it. Maintaining oil production capacity is as significant as the petroleum industry contractor potential

→ The US is set to re-impose sanctions on Iran's petroleum industry in a bid to stymie investment in this vital sector; however, Mohammad Mostafavi, director of NIOC investment and business directorate, tells Iran Petroleum that Iran would not face any production slump as upstream activities are under way.

The full text of Mostafavi's interview is as follows:

## »» Could you update us about the contract for Phase 11 of South Pars gas field?

This year subcontracts will be struck with subcontractors. Tenders for SP11 have been held and activity in this project is being followed up on at a faster pace.

## »» In light of US pressure on France's Total to quit cooperation with NIOC in SP11, has any decision been made with regard to replacing the Total stake in the project?

Members of the consortium developing this project are accountable within the framework of the terms and conditions of the contract. So far, no changes have been officially made in the provisions of the contract. Total holds a 50.1% share, China National Petroleum Corporation (CNPC) a 30% share and Iran's Petropars the remaining 19.9% share in the project. Any possible changes will be announced.

## »» Regardless of the possibility of CNPC being chosen as the operator of the Azadegan oil field, in general what do you think of the Chinese firm's involvement in Iran's oil development projects?

To be realistic, CNPC is a good company. It is among the world's top five oil companies. It is growing rapidly and is in competition with leading oil companies. I believe that not only under sanctions, but under any circumstances, we have to work with the Chinese. China is the world's largest consumer of energy. As oil prices change with the turn of time, so do economic conditions and business opportunities. That requires economic organs to make suitable decisions. What's more is that China is also experiencing the fastest growth and it could therefore be a strategic partner to any energy supplier including Iran. Cooperation with major Chinese firms is of strategic significance for NIOC.

## »» Agreements for development of Yaran and Azar oil fields have long been expected to be finalized and signed. Many believe that these agreements had to be finalized prior to Donald Trump's position on JCPOA and pulling out of it. What do you think of that?

It was not just question of Yaran and Azar. We had several agreements ready to be signed, but they have not been signed. Trump's position in May was not the only criterion for the



Besides implementing development plans aimed at preserving and enhancing recovery rate from Iranian oil fields, the National Iranian Oil Company (NIOC) is pushing ahead with its talks to finalize oil agreements.

finalization of agreements as possible changes at the international level had thrown Iran into such ambiguity that signing long-term contracts was impossible. Even before the US president made up his mind, the conditions were much more complicated than they are now because foreign parties did not know what action to take. Now everything is clear and I can tell you that busy days lie ahead of us. Last year we signed three IPC agreements which have got under way. Development of such big fields as Azadegan is being pursued quickly, whose development contract will be signed this year. An addendum to the Yadaravan contract is to be signed soon to allow for the second phase development of this field. At worst, we can keep our production levels unchanged and implement enhancement projects to boost our output. With the implementation of such packages, oil contractors will be flooded with more work. Therefore, despite all hardship and to the dismay of the US, upstream petroleum industry activities are set to be numerous this year. We can brace for a reasonable and not necessarily dramatic prosperity in oil. Furthermore, the present circumstances will not go forever, i.e. better days will arrive.

## »» Implementing production preservation and enhancement projects is expected to add several hundred thousand barrels to national oil output. Are such projects being pursued seriously under the present circumstances?

Definitely, they are being followed up on seriously because preserving contractor work potential in the country is a must. Even if stagnation is set to be intensified in the country, such projects would take up added significance. The contractor work potential in the petroleum industry has taken shape throughout years and we have to appreciate such potential and safeguard it. Maintaining oil production capacity is as significant as the petroleum industry contractor potential. The same objective is being sought in the implementation of the 34 packages. However, we have to take into account the flipside of the coin, too. Contractors are likely to come under pressure due to foreign

exchange rates, increased labor costs and other problems gripping the Iranian economy. That throws a challenge to the implementation of projects. But NIOC is standing by these projects and remains determined to bring prosperity back to petroleum industry by executing them. Maintaining oil production capacity and even increasing it to about 4.5 million barrels is significant for NIOC and that is why we are pushing ahead with the 34 packages.

## »» It was recently announced that NIOC planned to sign two agreements worth \$1.2 billion with the Persian Gulf Petrochemical Industries Company and Maroun Petrochemical Company to prevent the flaring of 22 mcm of gas in the East Karoun area. Would you please tell us about plans for the renovation of flare gas gathering installations in southern Iran? When will the two agreements be signed?

Both agreements have been recently approved by the Board of Directors of NIOC and they will be signed. Under these agreements, which will be signed between NIOC and the Persian Gulf Holding and Maroun Petrochemical Company, 30 projects (mainly small-scale) will be signed over a two-year period. Supplying feedstock to Bidboland-2 petrochemical plant, now under construction, as well as Maroun Petrochemical Plant, increasing gas liquid production by the National Iranian South Oil Company (NISOC)



Mostafavi

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and increasing petrochemical feedstock supply by Bandar Imam, production of light gas and hard currency earning for NIOC, and above all improving the environmental standards in the eastern part of Karoun River are among major advantages of implementation of these contracts.

»» **Was it based on the policy of petrochemical plants' stake in the startup of LNG units for feedstock supply to choose the Persian Gulf Holding and Maroun Petrochemical Plant for this purpose?**

Exactly! Since they consume feedstock achieved from flare gases they have required economic motivations to implement such projects. Furthermore, they enjoy sufficient financial and technical potential.

»» **Has this approach received good feedback so far?**

Yes, of course! For instance, the Bidboland-2 petrochemical project which is under construction by the Persian Gulf Holding has had good progress and is expected to come online next year. The Parsian refinery project, under way by the Imam Khomeini's Command Executive Committee, and the ethane recovery unit of SP12, which is under way by Kangan Petrorefinery, has also had good progress.

»» **But the NGL 3200 project is slow, isn't it?**

The Holding has no problem with financing this project, but challenges between this company and its former contractor have yet to be removed. That is why the project has been slowed down. However, pushing ahead with a project which has had several percent progress with hundreds of millions of dollars in spending is not easy. Certain procedures must be gone through before the project is back to normal. That explains the slow pace of work at NGL 3200. I have also to recall that after an addendum is signed to the NGL 3200 agreement between NIOC and the Persian Gulf Holding, the latter would take ownership of the project and NIOC would no longer be its owner.

»» **Isn't the project likely to be restituted to NIOC?**

Based on the policy of the Ministry of Petroleum, ethane recovery units like Bidboland-2, as well as Pars Petrochemical and Maroun Petrochemical lie under the category of petrochemical projects and ceding these units to NIOC would be meaningless. We have to accept that ethane recovery units are vital for the petrochemical industry as they feed



petrochemical units, but they are considered as secondary priority for NIOC. Therefore, petrochemical plants would be more serious than NIOC in following up on ethane recovery units and our petrochemical industry is in good financial conditions now. Furthermore, NGL 3022 or NGL Kharg were not born yesterday so that we could claim that their incompleteness emanate from current policies or think that if NIOC becomes administrator of the project everything will be all right. Furthermore, we plan to use mobile processing systems in West Karoun. To that end, we plan to install the first system in the Azadegan field. Undoubtedly, removing pollution in Khuzestan Province would be of high significance for the petroleum industry. Pollution is affecting urban and rural areas of Khuzestan Province both in the East and West Karoun areas. We hope that the projects we have got under way, would help reduce to zero gas flaring in East Karoun over two years and NGL 3022 would put an end to gas flaring in West Karoun.

»» **What about contracts which have been signed with Tamkar Gas Equipment Company and Hirbod Niroo for Parsi, Maroun and Mansouri no flaring projects? Have any of them, except for Parsi, become operational?**

Four agreements were signed in Parsi, Maroun 3, Maroun 6 and Manouri units in order to prevent the flaring of about 44 mcf/d of gas in southern oil-rich areas. As you mentioned, the gas gathering facility of Parsi came online earlier this year. The three other projects are also to come online this year. I think that Maroun 3 would start up within two to three months. We have also signed an agreement with Masjed Soleyman Petrochemical Plant for the gathering of 100 mcf/d of gas around Masjed Soleyman, and Bidboland-2 Petrochemical Plant is expected to come online in 2019. These projects along with two more contracts which are to be implemented soon would reduce to zero gas flaring in East Karoun.

»» **How has NGL Kharg been doing after the agreement was signed for completing the**

**project?**

We hope that this project would be delivered to investor in one month so that after some modifications everything would go ahead well. This is of course a big project and it may be affected by sanctions from certain aspects. NGL Kharg or NGL Siri which are facing feedstock shortage was among projects that started with erroneous design and unrealistically high capacity. That is why they were faced with problems. NGL Kharg was initially designed to attract \$4.7 billion investment for gathering 600 mcf of gas. We reduced the figures to €800 million for gathering a maximum 300 mcf of associated gas in the Kharg and Bahregan areas, which are related mainly to Forouzan.

»» **Where does NGL 3100 stand now?**

This project is under way by OIEC (Oil Industries Engineering and Construction Company) for gathering associated petroleum gas in the Dehloran, Azar, Cheshmekhosh and West Paydar fields, and supplying feedstock to Dehloran Petrochemical Plant. The project is going ahead appropriately and I hope it would come online next year. In total, 1.5 bcf of gas is being flared in the country, mainly in East Karoun (more than 700 mcf), Masjed Soleyman (100 mcf), Kharg (300 mcf), West Karoun (250 mcf), Ilam (150 mcf) and some for Salman. The 2300, 1700, 2400 and 1800 units were off the agenda as we are facing surplus ethane recovery.

»» **You are a Board member at Iran LNG project. Have any changes taken place in this project?**

Based on a previous MOU with Gazprom, the Russian company is conducting a feasibility study on the project.

»» **Several gatherings held by the Petroleum Association reviewed necessities of stepping into LNG market. How do you assess such gatherings?**

They have been very positive. In my view, the expert issues discussed in these gatherings managed to transform this issue from media hype to an expert subject. I hope that practical steps would be taken after policymaking by the Supreme Regulatory Board.

»» **Do you suppose any other agreements will be signed?**

We are likely to sign an agreement with Kangan Oil and Gas Company. We are also following up on an agreement in the FLNG sector.

Mostafavi

In total, 1.5 bcf of gas is being flared in the country, mainly in East Karoun (more than 700 mcf), Masjed Soleyman (100 mcf), Kharg (300 mcf), West Karoun (250 mcf), Ilam (150 mcf) and some for Salman

Mostafavi

NGL 3022 or NGL Kharg were not born yesterday so that we could claim that their incompleteness emanate from current policies

# Win-Win Deal in Caspian Summit

The presidents of the five Caspian Sea littoral states – Iran, Republic of Azerbaijan, Turkmenistan, Kazakhstan and Russia – held their fifth summit, ending in a landmark and hard-won agreement on the landlocked lake's legal regime. Hosted by Kazakhstan, the summit also resulted in the signature of six documents for strategic and economic cooperation in the Caspian Sea.

Iran's President Hassan Rouhani said the deal on the Caspian Sea's legal regime was a very significant step in line with further convergence among the countries bordering the vast body of water.

"Today the Caspian Sea, as a very important and strategic zone, is the center of friendship, cooperation and convergence among its governments and nations," he said, adding that the Convention on the Legal Regime of the Caspian Sea was a sovereign instrument governing obligations and rights of the five littoral states.

Before this convention was signed, the only agreements ever signed on the Caspian Sea dated back to 1921 and 1940 – both between Iran and the then Union of Soviet Socialist Republics (USSR).

Rouhani said that the new convention did not divvy up Caspian Sea bed resources, adding that separate agreements would be needed for dividing the rich hydrocarbon reserves.

The Iranian president said the only option for the Caspian Sea states to prevent

any dispute in recovery from the subsea energy resources in un-demarcated zones was "joint production" from the resources. He called on the littoral states to steer clear of any unilateral exploration and production activities.

Rouhani's remarks make clear that the convention signed between the littoral states had not divided the Caspian resources, for which further talks are needed.

In response to speculation raised by the public opinion regarding the division of the Caspian Sea, it must be noted that due to the Islamic Republic's full knowledge

of legal issues as well as Republic of Azerbaijan-Turkmenistan dispute, the other four countries have been convinced to resolve the issue in the future.

However, what is of significance is that the five nations have reached understanding on the Caspian Sea, which may be billed as a win-win deal. The convention on the Caspian Sea would allow for better agreements.

Environmental concerns and obligations in the Caspian Sea ecosystem, safety issues in the face of critical conditions and natural disasters, military security in the Caspian Sea and the ban on foreign military presence there, exchange of equipment and



manpower between the littoral states and sharing experience in recovery from energy resources are all positive aspects of the convention that would help the Islamic Republic push ahead with its development objectives there.

Legally speaking, a country's borderline lies up to 15 miles from land, while its fishing zone is up to 10 nautical miles. This law shall apply as long as no agreement has been reached on dividing the Caspian Sea.

So far, no demarcation of the Caspian Sea has been legalized and littoral

states are not authorized to carry out exploration or production activities outside their territorial waters.

However, thanks to peace and friendship, and based on agreements between the littoral states, the Khazar Exploration and Production Company (KEPCO) – on behalf of National Iranian Oil Company (NIOC) – started exploration surveys in the southern Caspian Sea two decades ago. These surveys have yielded positive results, whose updating has led to the signature of memorandums of cooperation with leading companies for joint oil cooperation with Republic of Azerbaijan.



## ICOFC on Development Track

- Iranian Central Oil Fields Company (ICOFC) – one of the five oil and gas companies affiliated with National Iranian Oil Company (NIOC) – is the second largest gas producing company in Iran.

Since most oil and gas fields administered by ICOFC are in the second half of their lifecycle the need for investment in preserving their production capacity and reaching maximum efficient recovery by applying improved oil recovery (IOR) and enhanced oil recovery (EOR) on one hand and limited national financial resources on the other, have forced the company to attract investment for upstream and downstream development projects. “We expect ICOFC’s oil and gas recovery from operating fields to increase significantly after implementation of memorandums of understanding on the development of fields under the newly developed framework of oil contract for horizontal drilling, IOR/EOR, applying state-of-the-art technology, and installing gas compressors,” Ramin Hatami, CEO of ICOFC, told “Iran Petroleum”.

### No Halt

ICOFC has three offshoots; namely, South Zagros Oil and Gas Production Company, West Oil and Gas Production Company, and East Oil and Gas Production Company. ICOFC is mainly responsible for the development of onshore fields located in 14 Iranian provinces. ICOFC comes second in gas production, just behind

the giant South Pars gas field. ICOFC runs 51 gas fields, 28 oil fields and one oil/gas field, which constitute 80% of Iran’s total oil and gas fields. Ever since its establishment in 1998, ICOFC has operated 13 major projects, leading to enhanced oil and gas production capacity. These projects include development of nine oil fields like Cheshmeh Khosh, Saadatabad and Sarvestan, Paydar and West Paydar, development of gas fields like Homa-Shanol-Varavi and Tang-e Bijar, construction of Phase 2 of Parsian refinery and installation of Nar gas compressor. “Over recent years, we have been witnessing an improvement in drilling and HSE indices, increased oil and gas production and enhanced recovery from jointly owned fields [run by ICOFC],” Hatami said. Ever since the new contractual framework for oil contracts was introduced in Iran under the title of Iran Petroleum Contract (IPC), ICOFC has been in talks with domestic and foreign companies for the

development of oil and gas fields. Of MOUs signed between NIOC on one side and Iranian and foreign companies on the other, for the development of oil and gas fields and conducting feasibility studies on gas compressor projects, 20 belong to ICOFC-run areas. Ten of these MOUs are now in the stage of financial and technical proposal, which would be submitted to NIOC in the near future. Hatami said: “We expect two MOUs to end in agreements.” Last March, NIOC and Russia’s Zarubezhneft signed an agreement to develop Aban and West Paydar fields. “This agreement is in the process of implementation,” said Hatami. Development of Aban and West Paydar in the Bangestan and Asmari layers had already been completed. What remains to be done is gas gathering and gas injection.

### Enhanced Recovery Planned

In addition to operating development plans, NIOC intends to boost Iran’s oil production capacity through cooperation with national and international firms. These projects are expected to be operated by Iranian companies, but foreign partners would be hired if need be. Implementation of this project takes up added significance in light of the fact that most oil and gas fields in Iran are in the second half of their lifecycle. Furthermore, these projects would boost activity in contracting because the lead contractor

of these projects are Iranian firms and foreign companies may work alongside Iranians as their partners. ICOFC is in talks with competent Iranian companies. Planning for drilling new wells, workover and completion of old wells are among cases which Iranian contractors need to take into consideration in production maintenance and enhancement projects. Of course, production from undeveloped fields by using cutting edge technology and enhanced recovery are among future plans of this company, which would be discussed in negotiations with Iranian and foreign firms. ICOFC needs \$7.5 billion in investment to enhance recovery from its

oil and gas fields and install gas compressors.

### Oil and Gas Output Maintenance

The last Iranian calendar year to March 2018 was a good year for ICOFC, Hatami said. Referring to production of oil, rich gas and condensate by ICOFC, he added: “Combined rich gas production at Zagros Oil and Gas Production Company reached 58,108 mcm, condensate output reached 18.43 million barrels, while oil production reached 2.09 million barrels.” “At West Oil and Gas

Production Company, combined rich

gas production from Tang-e Bijar gas field was 1,677 mcm, gas condensate was 2 million barrels, while oil production from independent and shared oil fields stood at 71.5 million barrels,” said Hatami. “At East Oil and Gas Production Company, rich gas production from independent and joint fields reached 15,281 mcm, while gas condensate output stood at 594,000 barrels.” Hatami said rich gas production by ICOFC equaled 101.66% of target envisaged by the Board of Directors, while oil production equaled 99% of the Board’s target. He said the main plans envisaged by ICOFC in the current calendar year included overhaul, development projects, following up on contract negotiations and sustainable oil and gas production.



# Euro-5 Gasoil Output Up in Iran

National Iranian Oil Refining and Distribution Company (NIORDC) has in recent years taken effective steps with a view to reducing air pollution in favor of the environment. It has implemented well thought-out plans at nine refineries in Iran in a bid to improve the quality of products. One of these projects is oil and gas desulfurization at the Tabriz Oil Refining Company. The desulfurization unit has come online tentatively. The completion of this process would soon add 6 ml/d to Iran's Euro-5 gasoil. The Tabriz oil refinery is one of nine old treatment facilities in Iran. It was privatized in 2010.

It has now 15 refining units to process crude oil for conversion to refined petroleum products as well as 8 utility services to support the process of production. According to NIORDC instructions, the Tabriz refinery along with nine other refining companies is required to cut its fuel oil output to below 10% and concomitantly improved the quality of products to Euro-5 grade. The sulfur content of fuel oil has been cut to below 5% in weight. In this capacity,

refinery development projects started in 2007 and in the first step a new gasoline production unit was envisaged, which came on-stream in 2013.

## €42mn Investment Under Axens License

Gholam-Reza Baqeri Dizaj, CEO of Tabriz Oil Refining Company, said newer desulfurization units were planned to be built at a higher capacity while being equipped with new technology. That would allow for gasoil production in line with global standards. The new unit was built with a €42 million plus IRR 787 billion investment under France's Axens license. Detailed engineering and installation have been conducted under the supervision of Iranian experts and contractors. Baqeri said that no low-quality gasoil should be supplied by any refinery as of March 2019. "We have considered incentives for the suppliers of quality

products," he said. Referring to the trial-run production of base oil, he said the project was tested in partnership with a knowledge-based company and the Research Institute of Petroleum Industry (RIPI).

Then, he said, a foreign-made catalyst and oil and gas desulfurization unit helped the project come on-stream on industrial scale. "This project is coming online with a rated capacity of 270,000 tonnes a year, whose production capacity currently stands at 90,000 tonnes a year," said Baqeri.

## Euro-4 Gasoline

The Tabriz refinery is producing 5.5 mt/year of products, 90% of which is being converted to fuel.

Liquefied petroleum gas (LPG) production constitutes 3% of the refinery output. LPG output stands at 300,000 l/d. Baqeri said the Tabriz refinery is currently producing 3.5 ml/d of gasoline, adding that half the output is Euro-4 and remaining half is clean gasoline. Euro-4 gasoline production is expected to grow this year. Other products supplied by the Tabriz refinery include 1 ml of kerosene and 4 ml of fuel oil.

## Tabriz Refinery Brand

The Tabriz refinery is among Iran's first refining companies in Iran to have received NIORDC permission in the oil and gas sector. "We have started our

activity in branding," he said. Neighborhood with Azerbaijan, Turkey, Iraq, Armenia and the Republic of Nakhichevan has boosted chances for the Tabriz refinery to strengthen its presence in global markets. Multinational companies are now able to purchase the Tabriz refinery-branded products to be supplied to filling stations located nearby. The Tabriz refinery products enjoy strong technical support. In recent years, it has boosted its experience and technical savvy. In terms of hardware, it has the most advanced laboratories in refining and oil production in Iran, which is unique in the country. The refinery managers are not worried about the market as multinational companies are ready to sell the Tabriz refinery's products to motorists plying border areas.

## €500mn Investment in Environment Projects

More than 38% of the Tabriz Petrochemical Company's stocks are held by the Tabriz oil refining company. The petrochemical firm has so far invested more than €500 million in

environmental projects like sulfur granulation, high-quality gasoline production as well as bitumen production. It has separately invested €5 million in flare gas gathering.

## Sanctions Teach New Methods

Iran's petroleum industry is not unfamiliar with sanctions. Iranian contractors have already learnt how to deal with restrictions to avoid production halt. Although sanctions have imposed costs on this industry, the petroleum sector has always looked at the sanctions as a tool for improving its activities. Baqeri acknowledged that imposition of sanctions would slow down the work; however, he noted: "But we will learn under such circumstances to test new methods." "We have already considered all possible methods in order to supply equipment even after sanctions have been imposed and we will have no problem in this regard," he said. Baqeri referred to a €1.5 billion project for improving the quality of Tabriz refined petroleum products to Euro-5 grade in cooperation with Chinese and Russian companies and European financiers. "About 60% of equipment used in the gasoline production unit has been provided domestically. All necessary catalysts for the refinery will be supplied by domestic companies," he said.

# Oil Market Can't Ignore Iran



Major oil exporting countries had concluded that prices needed to go up. Some of producers were faced with budget deficit or for example Saudi Arabia is planning to list Aramco shares on stock market

→ However, Iran's former national representative to OPEC Javad Yarjani says Iran may not be completely driven out of global oil market as it sits atop the world's largest hydrocarbon reserves. He told "Iran Petroleum" in an interview that fellow OPEC members could not collectively fill Iran's void. Here is the full text of the interview Mr. Yarjani gave to "Iran Petroleum".

» Oil prices have seen ups and downs over the past one year and particularly after Donald Trump took office as US president in January 2017. Over recent months, oil prices have gained ground. What do you think of the future of oil prices? Will this upward trend continue in the coming months?

What is common in oil market is that no price levels could be forecast for the future there. Only its unpredictability is predictable. Rarely may you find an expert to say with full certainty in which direction oil prices are headed. A variety of factors are involved in the oil market, some of which are fundamental and directly affect prices; like supply and demand and volume of reservoirs. In the meantime, there are some other factors like geopolitical issues, wars and political disputes between producers and consumers, which are not among fundamental factors but indirectly, affect prices. Therefore, one cannot say with certainty where the prices are headed now.

» However, what has happened over the past one year has driven up oil prices, which was predictable.

We have to note that based on events that

preceded the US's pullout from the JCPOA (Iran's nuclear deal with six world powers), it might be argued that the prices would move up. The reason is clear. Major oil exporting countries had concluded that prices needed to go up. Some of producers were faced with budget deficit or for example Saudi Arabia is planning to list Aramco shares on stock market. Therefore, a variety of factors were unified so that high oil prices would be in the best interests of producers. It may be concluded that the upward trend of oil prices was the outcome of OPEC-non-OPEC in 2016.

» But in this decision, OPEC was not the only factor as non-OPEC producers led by Russia, were also involved in the upward trend of oil prices.

Yes, of course! By that time Russia was restructuring its own economy and army. Therefore, revenue from oil and gas exports largely helped Russia reach its economic and security objectives. The unfavorable conditions prevailing in the oil market in 2016 and the price slump to below \$30 in that year in January pushed Russia as the largest non-OPEC producer and exporter of oil to close ranks with



Oil market has been experiencing special conditions in recent months. On one hand, oil prices have followed an upward trend while on the other, US President Donald Trump is imposing oil sanction on Iran and calling on OPEC countries to help his anti-Iran campaign.

OPEC for driving prices up.

» But after the US's unilateral pullout from the JCPOA and President Trump's announcement of planned re-imposition of sanctions on Iran in November, the prices were up again. It was predictable, wasn't it?

We cannot yet say where the prices would go for sure. On one hand, the possible exit of part of Iran's oil from the market would drive prices up, but on the other, there are allegations that certain countries can fill Iran's void in the market. That remains shrouded in ambiguity and may not be solid-based. Now we have to see whether such claims would be translated into action or they would be limited to words. Therefore, I reiterate once more that we cannot say with certainty which direction the prices would take.

» Speculation continues about oil price hikes after Iran's elimination from the market. Conflicting figures have been bandied about, from \$100 to \$400.

If we start from the pessimistic aspect, we should keep in mind that never have such figures as \$400 been experienced in the oil history. That may happen when a group of oil producers quit supply in the market altogether, which is unlikely to happen. Furthermore, the global economy cannot tolerate prices above \$100 a barrel, and conditions would get tough. Several years ago we experienced \$140 prices. I remember well the world economy was fraught with concerns. It was not limited to consumers. OPEC was also worried about high oil prices because sustained high prices could seriously damage the global economy and minimize demand. Therefore, everyone helped keep prices within a certain limit. For its part, OPEC adopted decisions which would help reduce prices. Of course, the global economic crisis finally sharply drove down prices to below \$40 a barrel in December that year. OPEC cut 1.2 million from its output in a bid to keep the price decline in check.

As far as Iran's exit from oil market is concerned, I don't think they could completely

drive Iran out. First and foremost, no country will accept to be deprived of its main source of exports, and Iran would use every tool at its disposal to sell its oil and will not bow to US demands. Second, we have to see what position Europe, China and India would take after Iran's oil export is sanctioned. All these issues may affect the prices. But it is evident that political intervention in the oil market would lead to more negative results for global economy.

» How can issues like President Trump's offer of unconditional talks with Iran affect oil prices?

I reiterate that the complicated structure of oil market would not allow any definite forecast on this issue. All of us know that oil is traded on paper not physically.

The way oil news is reflected and oil market analyses impact the minds of billionaires who are investing in the oil market because they buy and sell oil based on reports of price reporting agencies and of course in the hope of higher oil prices.

» The US is unlikely to be able to fully ban Iran's oil sales in light of current global economic conditions. Anyway, the US is imposing unlawful and unilateral sanctions on Iran's petroleum sector. Iran is not subject to international embargo and the European Union has thus far shown support



The way oil news is reflected and oil market analyses impact the minds of billionaires who are investing in the oil market because they buy and sell oil based on reports of price reporting agencies and of course in the hope of higher oil prices.

for Iran. That is why oil market conditions have got complicated.

Yes, that's it. Many analysts are of the opinion that Iran may by no means be dropped off the oil market. Even if the Trump administration intends to risk such a thing, it has to wait for its impacts on regional geopolitics, global economy and the Middle East. Iran's oil enjoys a significant standing in global economy. Many countries are well aware that in case Iran's oil exports are completely cut the global economy will be affected.

» Some countries like Saudi Arabia have announced their readiness to provide any extra oil. Iran has not been mentioned directly, but it goes without saying that Saudi Arabia meant it would make up for any shortages resulting from the imposition of sanctions on Iran. Of course other countries like Kuwait and Iraq have also raised their output. Do you think that Saudi Arabia will be able to supply extra oil in case Iran's oil is dropped off the market?

Under the current circumstances, the oil market conditions have become extremely complicated. On one side, Trump imposes sanctions on Iran's oil and on the other he calls on Saudi Arabia to raise its output by 2 mb/d. Saudi Arabia responded to the US without making clear whether or not it would be able to boost its output by 2 mb/d.

To be realistic, Saudi Arabia has largely invested in its petroleum industry in recent years as it did not face restrictions created for Iran's petroleum industry due to international sanctions. As a result, Saudi Arabia says it would be able to bring its production to more than 12.5 mb/d. In the meantime, analysts believe that even if Saudi Arabia manages to supply 12.5 mb/d such output trend would not be sustainable.

In case Saudi Arabia decides to produce oil at full capacity, the global oil production surplus will decline and it would plunge the oil market into complicated and dangerous conditions. Suppose that an unpredictable war breaks out or an oil producer experiences a sharp slump in production. Under such circumstances, extra production capacity would rush to help the economy by giving assurances that sufficient oil would be available for consumption all across the globe.

According to secondary sources, Saudi Arabia's production level has been close to 11 mb/d over the past 18 years, which is now below 10.5 mb/d. Of course Saudi Arabia has boosted its



production capacity, but experts believe that it could not fully compensate for shortages emanated from embargo on Iran's oil and that would negatively affect the market.

» Secondary sources also confirm that Iraq, Kuwait and United Arab Emirates raised their production in July. To what extent do you think these countries would be able to make up for shortages in the market?

Before answering your question, I deem it necessary to say that over recent years we have witnessed investment by some OPEC members with a view to increasing their oil production. However, due to financial issues or special political conditions we have seen that their production has not increased as planned. Now in response to your question, we have to take into consideration a variety of parameters. First and foremost, everyone knows that eliminating Iran from the global oil market would in the long term leave negative impacts on the global economy. Although some countries have said they would be able to make up for supply shortages the main question is to know if they would be able to raise their output sustainably and on the long term. Second, OPEC member states increase their production within the framework of the organization's policy. Now, if

they supply more than their allocated quota to bring down oil prices, will their budget face any problem? Naturally, these must be a balance in decisions. I don't think that these countries would be able even collectively to make up for Iran's oil shortage in the global markets.

» The US is banking in on OPEC's cooperation. In the 174th OPEC Conference, as you may recall, OPEC members rejected the US request. Iran also called on OPEC Member Countries not to bow to US demands, noting that OPEC policies should not be imposed from outside the group. Now that the US has decided to impose sanctions on Iran's oil exports, to what extent do you think OPEC member states would stand by each other?

OPEC was established in 1960 and it has been standing tall for 58 years. Such long activity indicates that OPEC has had benefits for its member states. That is why despite all ups and downs, OPEC has grown into an influential body for Third World nations.

Of course some countries including the US did their best in previous years to allegedly show that OPEC is unimportant in oil market and close to collapse. But every time the market faces any problem and prices fluctuate the same

countries urge OPEC to take action for the oil market balance. Therefore, OPEC continues to remain beneficial even to countries opposed to it.

OPEC is currently faced with tough conditions. This is not the first time that the US president is directly lobbying other OPEC member states in a bid to sway their minds. Despite all outside pressure, OPEC has so far maintained its independent nature, not for a specific nation but for the reason that each and every nation has seen that OPEC's existence would benefit them.

» What do you think of the current level of interaction among OPEC member states?

Rarely did someone think of cooperation among OPEC member states in the 174th meeting of the OPEC Conference. Despite all pressure exerted by the US government on member states to increase production, you said that OPEC decided to stick with the 2016 production ceiling. That was a breakthrough for OPEC. If we base everything on the past, it seems that OPEC would get off this crisis, too. Should it fail to overcome this crisis, the countries that sought to undermine OPEC would realize their objectives. However, one thing is clear; elimination of OPEC would further harm countries favoring its collapse.

Yarjani

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Yarjani

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»» If OPEC members intend to show their commitment to the producer body are they likely to hold an extraordinary meeting?

Decisions within OPEC are taken unanimously. If a nation intends to boost its production against the will of member states, OPEC would wield no tool to punish it. But we should pay heed to the fact that OPEC is not a cartel, its decisions are clear and well defined, and everyone knows which decisions are taken in its meetings. There are neither any tools for punishing member states nor honoring their commitments. The most important tool wielded by OPEC for implementation of its decisions is to secure the interests of its member states. In the last OPEC meeting, Iran sought to remind member states of the fact that we have an agreement which we had better honor because it would benefit all nations. The agreement reached among member states was born out of a decision which finally benefited all member states. But an OPEC extraordinary meeting depends on the conditions of prices. In case prices fall or grow sharply to reach for instance below \$50 or above \$150 a barrel, OPEC President may call for an extraordinary meeting of the Conference.

»» The Russians have also claimed that they could boost their production by more than 200,000 b/d. Is that true?

You must know that in the aftermath of the collapse of the Union of Soviet Socialist Republics (USSR), Russian oil firms have made great success in boosting their oil production, raising their output from 6.25 mb/d in 2000 to nearly 12 mb/d in collaboration with international companies. But now their combined output stands at 11 mb/d. We also know that Russian companies are under sanctions and it is not clear if they would be able to add 200,000 b/d to their output. The figures given by Russian firms for output hike are for marketing purposes. However, I believe that none of oil exporting countries must accompany sanctions against other producing nations because oil embargo would definitely affect the economy on the global scale. If assurances are given of sufficient oil supply, sustained oil embargo would gradually harm every other country and the same nations are likely to face sanctions one day. Therefore, the minimum action to be taken by OPEC member states is to close ranks, which would benefit both producers and consumers.

»» In your view, does Mr. Trump favor high or low oil prices? When we juxtapose oil



embargo on Iran and Venezuela we conclude that the current US administration is not interested in oil price decline.

This issue can't be deal with so simply. It is no secret to anyone that due to the incorporation of driving private cars in the American citizens' everyday life, high gasoline price is a key factor in that country. Therefore, high oil prices would push gasoline prices, which would cause public discontent among Americans. In light of the key November elections in the US, Mr. Trump does not seem to be favoring oil price hikes at least until elections end. US shale oil companies favor high oil prices in order to pocket more profits. It is noteworthy that following the OPEC agreement in November 2014 and the subsequent flow of oil to market we witnessed a sharp fall in oil prices. That pushed shale oil producers to reduce costs and make their production economical. Therefore, in case oil prices fall again the shale oil firms would not halt work. On the other hand, oil production has jumped significantly in the US and this country is likely to become an oil exporter. That is why this group of producers prefers higher oil prices. Major international oil companies in

the US favor price hikes to the extent to justify future investment in this industry so that the rate of return on investment in oil would be lucrative enough. Therefore, it is hard to say with certainty whether or not the US is after increasing or decreasing oil prices.

»» What price do you think the US economy favors now?

The price of each gallon of gasoline in the US for end-user is a key factor in the application of policies in that country. As an importer and consumer of oil, they do not agree with high oil prices 100 percent.

On the other hand, since oil producing countries there, particularly shale producers, would be able to develop under conditions of high oil prices, they oppose very low prices. Therefore, due to the conflict of interests in that country, the current level of prices must serve the interests of all these groups.

»» On one hand Mr. Trump claims to be seeking unconditional talks with Iran, while on the other, he is imposing stiff sanctions on Iran. He has also called on countries doing

business with Iran to pull out of Iran or face penalties. In your view, is Mr. Trump reliable in his claims about Iran?

Apart from his track record in the first four-year term in office, every president in the US is willing to mark history in the second round of his presidency if his reelected. For instance, the Nixon administration is known for the resumption of ties with China although he failed to serve out his second term in office. Or Mr. [Bill] Clinton sought in vain to reestablish diplomatic ties with Iran. Mr. [Barack] Obama was also willing to resume full diplomatic ties with Iran, but he failed, too.

Now, despite all his threats against Iran, Mr. Trump may be seeking to undo all achievements of Mr. Obama, the former US president. That is in full harmony with Zionist regime's anti-Iran policy. Therefore, expression of readiness for unconditional talks with Iran seems to be aimed at causing further vision inside Iran. In his possible second term in office, Mr. Trump will be trying to register a positive track record. Resolution of hostility with Iran after 40 years could be a marking event in the name of Mr. Trump.

Yarjani

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# Strategic Petroleum Reserves No Placebo to Trump

Shuaib Bahman

**T**he United States Department of Energy (DOE) plans to dip into the country's strategic petroleum reserves and inject 11 million barrels of sour crude from October 1 to November 30 in a so-called attempt to make up for shortages on global markets.

The idea of Strategic Petroleum Reserves (SPR) initiated in the 1970s after the US economy was paralyzed by an oil embargo. As recently as 2011 it contained 727m barrels in caverns along the Texas and Louisiana coasts. It was used to address fuel shortfalls caused by emergencies such as Hurricane Katrina in 2005 and the collapse in Libya's production in 2011.

Emboldened by rising domestic oil production, legislators have in recent years mandated sales to fund the federal government. Since 2015, Congress has passed five laws that call for sales from the SPR that would cut its size to 410m barrels by 2027.

## Trump Administration Objectives

US President Donald Trump has ordered the oil sales under 2015 budget legislation and a healthcare law passed in 2016, according to the DEO notice. However, the Trump administration is pursuing at least two other key objectives:

**Preventing Supply Shortage Due to Iran Oil Embargo:** In addition to monetary and banking sanctions in Iran, the Trump administration is set to restore petroleum

sanctions on Iran. The US government is also in talks with Iran's oil buyers in order to convince them to reduce their oil purchase level from Iran to zero in the run-up to November 4, when the oil sanctions would take effect. The US has threatened to penalize any company that may purchase oil from Iran. Imposing new sanctions on Iran, which is the third largest exporter of oil in the world, will definitely give rise to volatility in the energy market, which would be an unfavorable outcome for both the US and its allies. Therefore, President Trump has approved the latest sale of crude oil from its SPR in a bid to reduce the consequences of future Iran oil shock.

**Increased Supply to Reduce Energy Carrier Prices in US:** The price of some refined petroleum products like gasoline has increased in the US in recent months, causing public discontent. That has put Trump in a difficult situation as the country is bracing for midterm elections in November. Therefore, he is injecting strategic petroleum reserves into the market in a bid to reduce the price of such products as gasoline in the hope of winning over public votes in favor of Republicans.

## Challenges

Injecting sour crude from the SPR is designed to show that the Trump administration is taking such measures in order to deal with oil price hikes in the run-up to the reimposition of sanctions which were lifted, under a 2015 historic nuclear deal between Iran and six world powers. However, compensating for market shortages due to Iran oil embargo

would be very difficult because the Iran sanctions are set to remain in effect for an undetermined period of time while the SPR is being tapped for a short period of time. Therefore, such stopgap measures as the planned sale of 11 million barrels of oil from the SPR would not make up for shortages in the market.

Rather, such measures would only blunt the impact of the Iran oil shock. Oil prices will keep rising in coming months, particularly because Libya and Venezuela have plunged into crisis and their oil supply is unlikely to increase significantly if not decline. Saudi Arabia, which the US is banking in on to supply extra oil, will not be able to significantly lift output to fill Iran's void in the market.

Even if futures prices decline temporarily after the US dips into its strategic reserves there would be no guarantee for gasoline prices to follow suit and go on a downward trend.

The US has traditionally used its SPR to tackle unpredicted crises, but this time it is tapping its strategic stocks to deal with a self-imposed crisis. The planned restoration of oil sanctions on Iran by the Trump administration in violation of the 2015 nuclear accord, known as the Joint Comprehensive Plan of Action (JCPOA), is in fact a crisis created by the US president following his May withdrawal from the aforesaid deal, whose other signatories are France, Britain, Russia, China and Germany.

Doubts hang over the US government's realization of objectives by imposing sanctions on Iran's oil. By tapping the SPR, the US will only lose part of its strategic

energy reserves without gaining any concrete results.

In the meantime, the US injection of sour crude from the SPR into the market will give rise to two consequences:

First and foremost, the US will witness a surplus in the supply of refined products and crude oil because domestic demand is not high enough to absorb the whole volume of refined petroleum products.

Second, in light of US failure in convincing buyers of Iran's oil to think twice, injection of sour crude into the market will not practically help reduce prices because the US strategic stocks have always been a determining factor in oil markets.

Under such circumstances, any decline in US oil reserves would drive oil prices up. Furthermore, selling crude oil from US reserves shows that other oil producers are not able to raise their output, an issue which will have significant psychological impacts on oil markets and push global prices up. The important point is that even if such countries as Saudi Arabia were able to boost their production they would not do so under low energy prices conditions. In other words, the Saudis will be convinced to increase production only when oil prices are high enough to help them make higher incomes from selling their key product.

Last but not least, President Trump's oil plan will fail to help him realize his political objectives on the national and international levels. The plan to dip into the SPR would neither help cut gasoline prices nor plug US federal budget deficit. Furthermore, it would be no remedy to harm from restrictions on Iran's oil exports.

**PEMEX Picks Contractor for Mexico Pipeline Project**

PEMEX has awarded McDermott International an EPCI/design contract for two subsea flowlines for the heavy-oil Ayatsil field development, 50 mi (80 km) northwest of Ciudad del Carmen in the Bay of Campeche. The first line (L1) will be a 24-in., 1.9-mi (3.2-km) long gas line connecting the PP-Ayatsil-C and PP-Ayatsil-A platforms. The second (L10) will be an 8-in., 0.9-mi (1.5-km) long oil pipeline connected to the PP-Ayatsil-C platform. Previously McDermott fabricated and installed the Ayatsil-C platform and it is also working for PEMEX on fabrication and future installation of the bkatun field facilities.

Mexico

**Ghana OCTP Makes 1st Gas Delivery**

Eni has started producing gas from the Sankofa field in the Offshore Cape Three Points (OCTP) integrated oil and gas project offshore Ghana. Production comes currently from two of the four deepwater subsea wells connected to the FPSO John Agyekum Kufuor. After final commissioning of the offshore facilities, production will gradually flow through a 60-km (37-mi) subsea pipeline to the onshore receiving facility in Sanzule, where the gas will be compressed and distributed to Ghana's national grid.

UK

Ghana

**Funding Secured for UK North Sea Project**

Independent Oil and Gas (IOG) has secured funding for its Harvey gas field appraisal well in the UK southern North Sea and plans to spud the well in December. A facility signed with London Oil and Gas of £15 million (\$19.3 million) will be used both for this campaign, to fund other costs in the run-up to IOG's gas development project

sanction, and full repayment of final remaining liabilities for the Skipper oil field exploration program in the UK northern North Sea. IOG hopes the well will prove gas across the entire Harvey structure – a competent person's report last November assessed potential resources as up to 286 bcf, with a 50% geological chance of success.

**CNOOC Details Exploration, Production Highlights**

CNOOC made eight new discoveries during the first half of the year, including six offshore China and two elsewhere. The company successfully appraised two finds in the hundred-million-tons of oil equivalent-range in the Bohai Bay area of the South China Sea. It also participated in ExxonMobil's exploration campaign in the Stabroek block project offshore Guyana. To date, two of the five new projects CNOOC planned to bring on-stream this year, have started production.

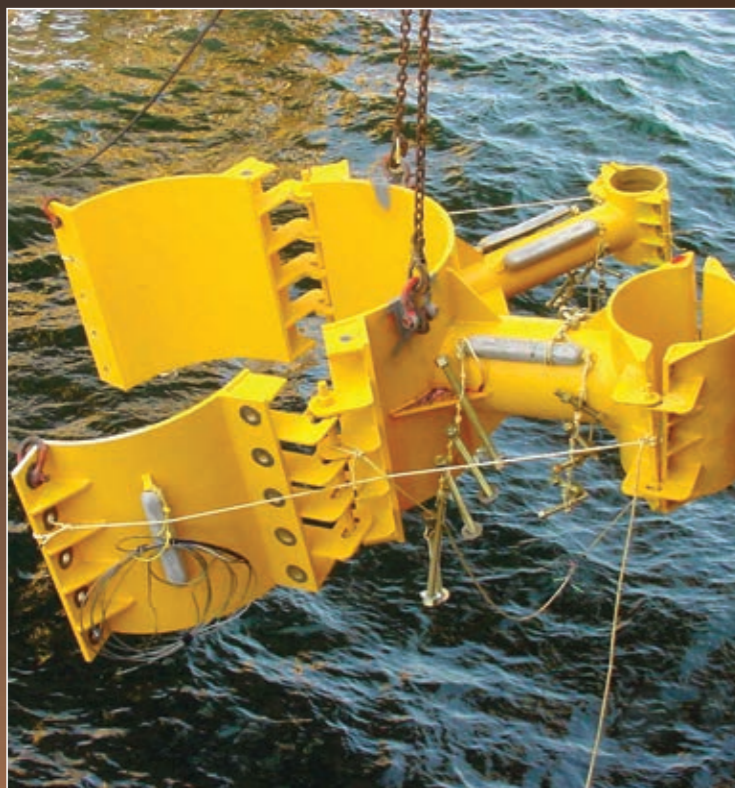
China

Australia

**Australia Ichthys LNG Starts Up**

INPEX has started production from the Ichthys LNG project offshore/onshore northwest Australia. Gas has started flowing from the first offshore production well following the completion of final safety verifications including additional measures concerning electrical equipment. Produced gas/condensate from the Ichthys field's subsea wells, in 260 m (853 ft) water depth, heads to the central processing facility (Ichthys Explorer) for separation into gases and liquids. At peak, the offshore facilities will produce 1.6 MMcf/d of gas and 85,000 b/d of condensate.

VIEW



VIEW



VIEW



## Ecopetrol to Focus Spending on Drilling

Colombia's state-run oil company Ecopetrol SA will focus spending for the rest of the year on increased drilling activity and securing operational licenses, its chief executive said. Spending delays earlier this year will make it harder for the company to achieve its 2018 \$3 billion to \$3.5 billion capital plan, CEO Felipe Bayon said in an interview at the New York Stock Exchange, where company officials observed the 10th anniversary of its NYSE listing. "It's a challenge" to hit spending targets, Bayon said, adding the company plans to have 41 working rigs at year end, up from 33 at the end of June. Acquiring drilling rights consumes "a lot of the CAPEX we invest," he said. Ecopetrol said earlier it will invest \$3 billion to \$3.5 billion during 2018, below the initial target of up to \$4 billion because of spending delays and protests that closed three fields in the first quarter. "It's never going to be smooth sailing in



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this industry. There's always uncertainty, there are things that are going to hit you that you don't know." Ecopetrol faced dozens of attacks on its Cano Limon-Covenas oil pipeline this year by the National Liberation Army guerrilla group, military sources previously said. The Cano Limon pipeline is

operating now, Bayon said, adding that production impacts this year were marginal due to rerouting the Bicentenario pipeline which connects to the Cano Limon line. Last year, the attacks and pipeline closure led to production losses of more than a million barrels, Bayon said.

NEWS ↙

### Canadian Oil Pipeline Faces Delay

Canada's resource minister said construction on the Trans Mountain project had faced a delay, but he did not provide an update on when the expansion of the oil pipeline from Alberta to British Columbia's coast would be complete. The Canadian government agreed in May to buy the pipeline from Kinder Morgan Canada Ltd for C\$4.5 billion (\$3.5 billion), in an effort to ensure its expansion went ahead. It is currently scheduled to be in service by December 2020. "Yes, there's a delay because the construction was stopped for a couple of months, but this is a project that is moving forward and will continue to move forward until it's done," Natural Resources Minister Amarjeet Sohi told reporters outside a Cabinet meeting in Nanaimo, British Columbia.

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NEWS ↙

### U.S. Drillers Cut Most Oil Rigs in 2 Years

U.S. energy companies cut nine oil drilling rigs, the biggest reduction since May 2016, following a recent decline in crude prices. The oil rig count fell to 860 in the week to Aug. 24, General Electric Co's Baker Hughes energy services firm said in its closely followed report. U.S. crude futures, trading around \$69 per barrel, were down about 7 percent so far this quarter, heading for the first quarterly decline since the second quarter last year. The U.S. rig count, an early indicator of future output, is much higher than a year ago when 759 rigs were active as energy companies have been ramping up production in tandem with OPEC's efforts over the past year-and-a-half to cut global output. So far this year, U.S. oil futures have averaged \$66.33 per barrel.

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## Norway Wealth Fund Should Keep Oil Stocks

Norway's trillion-dollar sovereign wealth fund should continue to invest in oil and gas companies, a government-appointed commission recommended, contradicting earlier advice from the central bank, and boosting the shares of oil firms. A decision on whether to drop energy shares from the fund's benchmark index, and thus divest tens of billions of dollars from oil and gas stocks over time, is expected this autumn. Shares of European oil and gas companies fell last November when the fund's manager, the Norwegian central bank, announced its proposal to cut the exposure of the fund - and thus the Norwegian government - to oil price fluctuations. "To get that small insurance (against the fluctuation of the oil price by removing energy stocks), it would cost the fund a lot, as it would be less diversified," commission chair Oeystein Thøgersen told Reuters. "Second, you would change



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an institution that has worked very well. And third, as the years go by, we have less and less oil risk," he said, referring to Norway's declining oil reserves. The fund, the world's largest sovereign wealth fund, invests Norway's revenues from oil and gas production for future generations in stocks, bonds and real estate abroad.

Energy stocks amounted to about 4 percent of the value of the fund, or about 315 billion crowns (\$37 billion), at the end of 2017, the commission said. Finance Minister Siv Jensen, who will present the government's decision this autumn, did not signal which way a decision would go.

NEWS ↙

### UAE ADNOC in Talks to Sell Refinery Stakes

State-owned Abu Dhabi National Oil Co (ADNOC) is in advanced talks with more than one potential buyer, including Italy's ENI, as it prepares to sell minority stakes in its refining business, two sources familiar with the matter said. ADNOC began a wide-ranging shake-up in 2016 to tackle competition from new producers such as U.S. shale firms. It listed 10 percent of its fuel distribution business last year and aims to expand its downstream business abroad. The company also started a sales process for a stake in its \$20 billion refining business, which the sources said it was likely to split between two or more parties. One said that ADNOC would favor companies it already has partnerships with, including ENI and Austrian oil and gas group OMV.

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NEWS ↙

### Sinopec Forecasts H2 Fuel Sales Drop

China Petroleum & Chemical Corp, the country's largest refiner, said it expects fuel sales to drop and processing rates for crude to stay flat in the second half of 2018, amid an oversupply of refined fuels. The company, known as Sinopec, will process 121 million tonnes of crude oil in the second half of the year, the same as in the first half, and its fuel sales will be 90.5 million tonnes, compared to 96.48 million in the first half, it said in a statement to the Shanghai Stock Exchange. Net income for the company for the first half was 41.6 billion yuan (\$6.05 billion), rising 53.6 percent from a year ago, the statement said. That beat a company forecast of 50 percent profit growth as the upstream and refining sectors delivered strong results.

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## Asia Naphtha East-Bound Cargoes Expected

Asian spot premiums for naphtha, a key petrochemical feedstock, have buckled in anticipation of a heavier supply flow, dropping to multi-month lows, as more European and Mediterranean cargoes are expected to arrive in the region next month. The cargoes arriving in Asia next month are currently estimated at 1.3 million tonnes, similar to August arrivals, according to trade and shipping sources and a report by Thomson Reuters Oil Research and Forecasts.

But traders said this would rise to at least 1.4 million to 1.5 million tonnes due to ample western supplies. Shipments from Europe to Asia normally take about 35 days, meaning cargoes loading in the next few days could still arrive in September. "The summer driving season has waned and there should be less (naphtha) required for gasoline blending and thus more naphtha export availability," said Matthew Chew, principle analyst at consulting and research firm



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IHS Markit. Also, Saudi Arabia's Yanbu Aramco Sinopec Refining (Yasref) had to offload heavy full-range naphtha feedstock recently following trouble at a gasoline-making unit, adding to the supply woes. Together these factors sank heavy full-range naphtha premiums for first-half October arrival in Daesan, South Korea, to \$3

a tonne to Japan quotes this week on a cost-and-freight (C&F) basis, down from this year's high of about \$17 on May 23. Scheduled maintenance at crackers starting in August, September and October in Japan and South Korea would also mean lower demand for open-specification naphtha.

### NEWS

## Bulgaria Could Raise Gas Prices by 15%

Wholesale natural gas prices in Bulgaria, a sensitive issue in the Balkan country, could rise by 15 percent to reflect higher prices on international markets, the head of the energy regulator said. Bulgaria gets almost all its natural gas supplies from Russia's Gazprom under an oil-indexed contract. Regulations require the gas wholesaler, state-owned Bulgargaz, to set the gas price quarterly, based on its contract with Gazprom, and the energy regulator takes the final decision. "There will surely be an increase in

the price of natural gas," the State Commission for Energy and Water Regulation's chairman Ivan Ivanov said. "There is a possibility the (state gas network operator) Bulgartransgaz's forecast of 15 percent rise to come true."

"It all depends on the moving of oil prices on the international market," Ivanov added that the gas price rise will also affect prices of hot water and heating as of Oct. 1, but declined to predict how much the increase would be. Utility prices are a politically sensitive topic in the European Union's poorest country because

they make up a large portion of monthly household expenses. High electricity bills sparked nationwide street protests in 2013 which toppled the government of prime minister Boyko Borisov. Analysts say the hike, expected to be announced next month, would hurt gas-dependent Bulgarian industries, weighing on their competitiveness, and translate into higher bills for hot water and heating to households.

Local employers and industrialists have already expressed concern over the expected double-digit hike.

## Hoegh LNG Backs Out of Chile LNG

Hoegh LNG said it had let agreements lapse in Chile that tied one of its floating liquefied natural gas (LNG) import vessels to a project there because approvals for the initiative were likely to be delayed again.

The Norwegian company was due to provide a floating storage and regasification unit (FSRU) to GNL Penco for 20 years under a 2015 deal, with an original start date of the second quarter of 2018, but regulatory permits were slow in coming. Hoegh said it had been "made aware that the planned approval process for the GNL Penco FSRU project is likely to be further delayed, and therefore the parties have agreed to let the contract expire". Hoegh's newbuild FSRU called Esperanza was intended for the Chile project, but with the delays in mind the company managed to agree a three-year charter deal with China National Offshore Oil Corporation (CNOOC) after taking delivery earlier this



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year. The company, one of few in the LNG industry that specializes in FSRUs, said it had won a tender to provide an import vessel to the Port Kembla project in Australia run by Australian Industrial Energy (AIE). Hoegh has 10 FSRUs that are employed under long-term contracts or chartered, with two newbuilds

due to be delivered. Chief Executive Sveinung Stohle told investors the Australian deal effectively left just one unemployed FSRU as of now. A newbuild due in November known as "FSRU 9" already has a 15-month charter, while the vessel is marketed to long-term projects, and "FSRU 10" is due next May.

### NEWS

## Shelved Aramco IPO Hits at Heart of Saudi Reforms

Saudi Arabia's decision to shelve what was billed as the biggest share sale ever is a major blow to the credibility of Crown Prince Mohammed bin Salman but there are other ways to finance reforms to strengthen the economy, bankers and investors say.

The initial public offering (IPO) of 5 percent of state-owned oil giant Saudi Aramco was a centerpiece of the crown prince's plan to diversify the kingdom's economy beyond oil by raising \$100 billion for investment in other sectors.

The 32-year-old ruler also promised that listing Saudi Aramco on international stock markets would help create a culture of openness in the secretive kingdom and make it more appealing to foreign investors. The decision to shelve the IPO raises doubts about the management of the process as well as the broader reform agenda, sapping the momentum generated by Prince Mohammed's dramatic 2030 Vision announcement in 2016 that helped propel him to power in the world's top oil exporter.

"The problem is: the more it gets delayed and the more there's not clarity on why it's getting delayed and what the issues are, the more it undermines confidence," said James Dorsey, a senior fellow at Singapore's S. Rajaratnam School of International Studies. "He's been very good at creating expectations but not as good at managing expectations," said Dorsey. Prince Mohammed launched his Vision 2030 program with promises to fundamentally transform Saudi Arabia's economy and open up its people's cloistered lifestyles.

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# Global oil and Asian product market, August

 Brent prices saw a downward correction this month as bears outpaced the bulls. Dated Brent averaged US\$71.5/bbl month-to-date vs. US\$74.3/bbl in July, posting a US\$2.8/bbl fall. Key bullish news on Saudi production and the introduction of the first set of US sanctions against Iran offered support for prices earlier this month. However, retaliatory tariffs announced by China on US exports outweighed these bullish factors.

Mahdi Moeini

**T**he Dubai market backwardation weakened over the course of July and by the end of the month the Dubai M1 vs M3 premium had fallen to its lowest level in more than four months. This went in line with the seasonal pattern of a longer Asian crude balance which will continue until it peaks around October, when the crude deficit in Asia is estimated to be around 22.7 million b/d, or 600,000 b/d less tight than in August. From October onwards the balance should tighten again, which in turn supports the notion that the backwardation in the Dubai market structure should gain further support over the course of Q4.

## Asian Product Markets

**Light Distillates (gasoline, naphtha)**  
Asian naphtha prices have continued to trend near parity with Dubai, but have started to come under some pressure since the beginning of the month. June data indicated the startup of ethylene production from CSPC's 1.2 million tpy cracker in China, providing additional upside to regional demand. With arbitrage spreads vs Europe

narrowing recently, we could see some limited upside to naphtha cracks in the near term as arb barrels get squeezed, but do not expect any long-term breakouts as Asia is nonetheless set to remain well supplied.

## Middle Distillates (gasoil, jet fuel)

East of Suez gas oil/diesel cracks rallied over the last few weeks and we see several factors supporting strong cracks going forward. The Asian balance will start tightening seasonally as the monsoon season wraps up and demand in Southeast Asia rebounds. After a relatively mild m-o-m tightening in September, the Asian balance coming in significantly tighter m-o-m in October. This should more than offset a lengthening in the Middle East balances. The call on East of Suez barrels from Europe should increase in the near term due to the

start of autumn maintenance and seasonally higher demand. Jet regards in the East of Suez have been weakening over the last few days, although this is as a reflection of very strong diesel cracks and not jet/kero weakness. The pull on Asian and Middle East exports from the West of Suez has been very supportive, and there is a support from this side extending into the coming weeks. Some weakness in terms of market structure - Singapore jet/kero forwards flipped into contango recently - should persist to support kerosene stock builds ahead of the heating season. Meanwhile, strong regional demand growth (+120,000 b/d y-o-y in Q3) should continue providing support.

## Fuel Oil

The rally in Asian fuel oil cracks has continued, hitting a 13-month high of -US\$1.40/bbl month-to-date in line with shrinking global balances. Asia's fuel oil deficit is estimated to be relatively flat y-o-y in August as both sides of the supply-demand equation tighten.

Soaring temperatures in North Asia have sent regional utilities scrambling for fuel oil to run their peak load power plants. Korean utilities returned to the spot market to tender for fuel oil for August delivery, with volumes amounting to 125 kt. This is unlikely to continue after August as support from the heat wave dissipates and several nuclear reactors return from maintenance.

Over in the Middle East, Saudi Arabia continues to pull HSFO from Europe to meet strong power generation needs for air conditioning (around 1.5 mmt per month since June). This contributed to the lower Western arb flows to Singapore in recent months. Saudi Arabia's fuel oil imports for power generation will remain elevated until end-3Q when temperatures start dropping again. The country's fuel oil deficit should widen by 44 kb/d y-o-y over 2H 2018 on the commissioning of new oil-fired power plants.

# Iran Economy to Survive, Even With Oil Embargo

US President Donald Trump pulled his country out of Iran's 2015 historic nuclear accord with world powers in May, saying he would snap back sanctions lifted under the deal into place on Iran. What would happen to Iran's petroleum industry once President Trump restores sanctions on Iran's oil sector? Will European and Asian buyers of Iran's oil align themselves with the US to drive Iran out of market? Will Iran see its exports fall back to pre-2016 levels when the nuclear deal, known as the Joint Comprehensive Plan of Action (JCPOA), had yet to be implemented? Will the US pullout from the JCPOA bring Iran's petroleum industry to its knees?

To answer these questions, we need to review Iran's petroleum industry status quo in a bid to have a more precise assessment of the impact of US withdrawal.

Iran's crude oil exports have reached all time highs thanks to the JCPOA.

Iran's oil production has reached stable conditions, while international sanctions

had cut it by 1 mb/d between 2012 and 2015. Iran offset the loss following the JCPOA implementation in early 2016.

## US JCPOA Pullout Forecasts

### 1mb/d Decline in Production/Export

Forecasts vary about possible decline in Iran's oil production and export. Some Western institutes tend to consider ambiguous conditions for Iran's petroleum industry. Some of them resort to exaggeration, saying Iran would lose 1 mb/d in its oil exports. If the sanctions are restored, energy research firm FGE estimates that Iran's output could be slashed by 250,000 to 500,000 barrels per day by the end of 2018. That figure would rise to 500,000 to 1 million per day through 2019. But energy analysts are not sure whether or not all of Iran's oil production growth is at risk.

Richard Nephew, who was the Principal

Deputy Coordinator for Sanctions Policy at the Department of State for the Obama administration from 2013-2015, said in a February report that about 400,000-500,000 b/d of Iranian oil could be disrupted within 12 months.

"If we assume that the renewed U.S. sanctions only target oil purchases, then the market analysis is somewhat simplified and would depend on how much Iranian oil is actually removed from the market. If the above characterization of government responses were correct, then it would be reasonable to estimate an initial year reduction of perhaps 400,000-500,000 bpd. In other words, Iranian exports would fall from their present value of approximately 2.4 million bpd to 1.9 million bpd within a year of sanctions reimposition," the report said.

## Iran's Role in Energy Supply to Europe

The director general of chairman's office at

the Tehran-based Strategic Council on Foreign Relations (SCFR), Abdorreza Faraji-Rad, said energy remained a key element in political and international developments.

"Europe doesn't want to be exclusively reliant on Russia's oil and gas, and it is seeking options to diversify its energy sector," he said.

Faraji-Rad said that the Organization of the Petroleum Exporting Countries (OPEC) was changing while the Russians were determined to increase their clout with oil market.

Meanwhile, he said, Saudi Arabia's future OPEC clout will decline and Russia will become more influential in international energy transactions.

"For its part, Europe does not want to remain dependent on Russia in the energy sector and it is seeking diversification," said Faraji-Rad. "They want Iran to remain an energy supplier to Europe. Their desired pipeline for Iran's energy exports cuts through Iraq, Syria and finally the Mediterranean."

## US Energy Security Challenge

According to "Foreign Policy", since withdrawal from the Iran nuclear deal in May, the Trump administration has faced a serious dilemma.

"On one hand, with the prospective reimposition of oil-related sanctions in November, it hopes to exert maximum economic pressure on the Iranian government by cutting its

petroleum exports as close to zero as possible. On the other hand, in a tight global oil market already under threat from geopolitical disruptions in Venezuela, Libya, and Nigeria, the loss of Iranian crude could trigger a major price spike in coming months—potentially inflicting significant damage on both the U.S. and world economies,” it wrote. “On top of existing outages in major producers like Venezuela and Libya, even with the threat of cuts in Iranian exports, a growing number of market analysts foresee the possible return of \$100-plus oil in the near future. The truth is that the U.S. economy remains one major unexpected step away from a devastating price spike.”

#### \$150 Oil

Clouds are gathering over the outlook for the oil market, as trade tensions and rising crude supply threaten to swamp demand growth, but some of the world’s most prominent energy investors are convinced the price will return to record highs, said Reuters.

Prominent hedge funds such as Andurand Capital and Westbeck Capital are betting oil

could skyrocket to \$150 a barrel from around \$75 now. The main driver is expected to be upcoming U.S. sanctions on Iran’s energy sector, which kick in November. “Our view is that by November 4, we will have lost between 1.3 and 1.4 million barrels (of output) a day. It is a very big number. That’s based on the view that the U.S. will allow a few temporary exception waivers. Ultimately, we could see losses from Iran exceed 2 million barrels a day,” Jean-Louis Le Mee, chief executive officer of London-based Westbeck, said. Pierre Andurand, who runs the \$1.2-billion Andurand Commodities Fund, and predicted the rise and subsequent crash in the oil price in 2008, responded on Twitter by pointing out OPEC’s spare capacity was at its lowest ever. “There is going to be a real issue,” he wrote, predicting prices above \$150 per barrel within two years. “We don’t sense a great deal of engagement yet from generalist investors. A few of them are starting to look at it now,” Will Smith, Westbeck chief investment officer said. “This is going to catch everybody by surprise. Some of the specialists are bullish – including Pierre (Andurand), ourselves and Energy Aspects,” he said.

#### Oil Supply Challenge

In its latest monthly report, the International Energy Agency (IEA) said the US plan to impose targeted crude sanctions against Iran, could significantly impact global supply and exhaust the world’s spare oil capacity cushion.

“As oil sanctions against Iran take effect,

perhaps in combination with production problems elsewhere, maintaining global supply might be very challenging and would come at the expense of maintaining an adequate spare capacity cushion,” the Paris-based organization said. “Thus, the market outlook could be far less calm at that point than it is today,” the IEA added.

#### Iran Oil Buyers

Iran’s crude oil is partly exported to European countries. Analysts believe that the Europeans are unlikely to drastically reduce their crude oil imports from Iran in coming months given Iran’s policy of détente. However, Europe is not Iran’s big oil market as the bulk of Iran’s oil goes to Asian nations. Asian countries are heavily dependent on Iran’s crude oil, India currently buys about 700,000 b/d of Iran’s oil with Iran becoming a critical and strategic supply source to meet the country’s growing demand for energy. China’s imports of Iran’s oil are roughly the same. Therefore, these two countries together import twice as much oil as the Europeans import from Iran. China is Iran’s major oil buyer and an architect of the JCPOA. China was firmly opposed to the US JCPOA exit and wants the nuclear deal to remain intact. Even now that Iran’s oil exports are not yet facing sanctions; China has centralized all its oil transactions with Iran within bodies exposed to US sanctions. Therefore, China is not afraid of any US penalties for importing oil from Iran. Obama-era politicians, who developed the

anti-Iran sanctions regime, have said that China would cut the biggest hole in the Trump administration’s web of sanctions on Iran.

Iran’s major Asian buyers – India and China – are unlikely to follow US regulations to reduce their oil imports from Iran.

South Korea imported 280,000 b/d of oil from Iran in the first quarter of 2018, while Japan’s crude oil imports stood at nearly 200,000 b/d in the same period. The present circumstances indicate that eliminating Iran from global energy market does not sound possible.

#### Overcoming New Sanctions

Under the present international circumstances and in light of Iran’s policy of détente, Washington’s pullout from the JCPOA could not effectively harm Iran’s petroleum industry and therefore Iran’s oil revenues would be spared.

The US exit would definitely affect oil prices, pushing them higher several dollars.

After the US imposition of sanctions on Iran, the latter would lose part of its oil exports, but in return, it will benefit from oil price hikes.

Iran’s oil revenues are forecast to exceed \$60 billion this year, up from nearly \$50 billion last year, \$30 billion in 2016 and \$20 billion in 2015. The forecasts for the current year are based on \$65 oil. Oil prices are even likely to go higher and help offset losses in Iran’s oil exports.

Last but not least, the Iranian economy will survive even with lower oil revenues and is unlikely to be harmed even its petrodollars fall below \$50 billion.



## Gas Odorant Developed in Iran

# Iran Operates Gas Refineries from A to Z

Along with the development of gas industry, production and supply of widely used products of this industry has been put on the agenda. Significant success has so far been achieved in this sector. The latest is the development of gas odorants, which are to be marketed in the future. The full text of the interview of "Iran Petroleum" with Majid Reza Jansarian, manager of refinery development projects at the Iranian Gas Engineering and Development Company is as follows:

**Q** Development of gas odorant is the latest success recorded by Iranian petroleum industry specialists. Could you please explain about it?

Ever since the birth of gas industry in Iran, gas odorants have been supplied by two countries. Now Iran is becoming the third supplier of gas odorant in the world. The basic design of this project has been done by the Research Institute of Petroleum Industry (RIPI), which is a license-holder of this technology in Iran. The basic design work was handled by the project engineering section until the gas odorant was developed.

**Q** How much is the production capacity of this unit per year? At what stage is it now?

The project is physically over. It is ready to enter the startup phase. Its startup will help meet domestic needs for odorant in addition to letting the country export odorants. After France and Russia – which are known as the major suppliers of this strategic product in the world – Iran is the third nation to join the international club of mercaptan producers with an annual output of 800 tonnes of gas odorant. Acquiring the technology

to produce odorants is breaking the global monopoly on this substance in addition to earning the country significant revenue through exports. Since Iran-made mercaptan is of high quality, there is good capacity for its supply on regional markets. It would be possible to export surplus production to neighboring countries.

**Q** Where is this substance being used?

Natural gas may inflict extensive damage in case of leakage. Therefore, we would need to odorize it in order to be smelled and to prevent explosion and

fire. Mercaptan, which odorizes natural gas, is a major element in gas industry safety. Injection of mercaptan will alert gas leakage to avoid financial damage and life losses.

**Q** What other projects are under way?

The projects are: building a 70,000-cubic meter storage tank at Parsian refinery, a logistics post in Phases 1-3 of Assaluyeh, and installing gauges in the refineries of Phase 1-3 and Phase 5 of South Pars.

**Q** What are the projects that have been carried out with regard to sustainable power supply to South Pars refineries?

After the startup of SP1-SP3 logistics posts located in Phase 1 of Assaluyeh, secure power supply with sustainable frequency and voltage for gas production has been provided to the first and second refineries, which would be effective in the sustainability of gas production system. Until recently, local power plants were used to supply power to South Pars refineries,

but numerous problems with these power plants prompted Pars Oil and Gas Company to establish a centralized power station in a bid to supply electricity to refineries more securely, more economically and more easily. The output of this power plant is 132-KV electricity, which would be reduced to 33 and 6 volts in the logistics posts of SP1-3 in order to be used in the first and second refineries. This project is now ready to come on-stream and be delivered to client. The startup of this logistics post would help phase out old turbines of SP1-3 which have been inflicting heavy maintenance costs in order to supply reliable electricity to the first and the second refineries for the purpose of sustainable natural gas production.

**Q** Development of Ilam refinery is one of the major projects currently under way. How much would it add to the refinery capacity?

After development of Ilam refinery (Phase 2 of Ilam refinery), the production capacity of the refinery will

increase 50%. In order to implement this project, basic design for gas treatment, sulfur production, gas compressor and sulfur degasification is over and is ready to be put out to tender.

**Q** What stage is the construction of Parsian refinery gas condensate storage tank in?

Once a gas condensate storage tank has been built at the Parsian refinery with a capacity of 70,000 cubic meters, a big step would be taken in favor of sustainable production from this plant. In the absence of possibility of carrying refined products, they should be stored in a facility to be moved on time. Therefore, after this project has been launched the refined products would directly go to the storage tank so that production would not be halted. The Parsian gas refinery storage tanks are under construction with prefabricated slabs. In order to avoid accumulation of inflammable gas, the ceiling of these storage tanks is mobile.

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# 50 Years of Iran Petchem Industry

Farshid Khodadadian

Iran's petroleum industry activities have not been limited to recovery from oil reserves. Rather, widespread activities have been carried out in other sectors including petrochemical and gas industry to the extent that Iran is now recognized as a leading state in both sectors.

On the global level, the petrochemical industry started its growth period after the end of World War II that was when it was spread all across the globe. Since petrochemical industry needed to be fed by oil and gas, it owed its progress to petroleum industry developments. In Iran, petrochemical industry was born after petroleum industry reached stability.

The establishment of a chemical fertilizer plant in Iran's southern city of Shiraz in 1958 was the first step for petrochemical production in Iran. Three years later, a small factory was set up in Shiraz to supply petrochemical products under the authority of Ministry of Economy. In the meantime, the Planning Organization focused on petrochemical industry and in 1962 it entered into talks with the Institut français du Pétrole (IFP). One year after, a memorandum was signed between them for feasibility studies pertaining to petrochemical projects. That

is how petrochemical sector became the top talking point in the country with different sectors and organizations making contribution to this new industry.

In 1963, the Iranian government decided to centralize all petrochemical industry activities in a bid to avoid parallel organs. In December that year, the Cabinet held a meeting and agreed on the establishment of Supreme Council of Petrochemical Industry. The Council was comprised of minister of economy, chief executive of National Iranian Oil Company (NIOC) and chief executive of Planning Organization. That helped emancipate the nascent petrochemical industry. The formation of this council ended the need for the IFP activity in Iran's petrochemical sector. In the meantime, the Planning Organization had undertaken certain measures in partnership with a foreign company and a group of Iranian private sector investors for the establishment of the Iran Chemical Fertilizer Public Stock Company. All these affairs were delegated to the Supreme Council. Although various entities were involved in the Supreme Council, the only organ competent to develop the petrochemical industry was NIOC. To that effect, the National



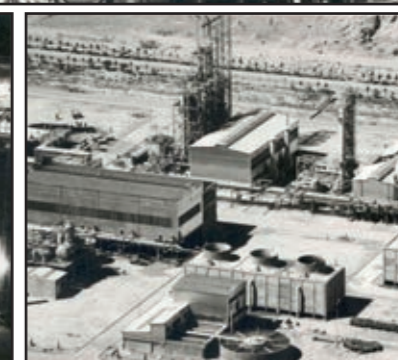
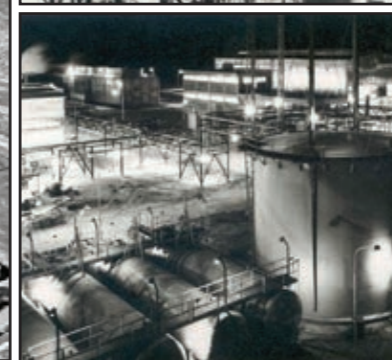
Consultative Assembly and the Senate approved a law in August 1964 delegating the authority of all petrochemical activities to NIOC. Later on, NIOC was authorized to establish a subsidiary known as National Petrochemical Company (NPC). That was the start of administration of petrochemical affairs in Iran. NPC was launched in January 1965 with an initial capital of IRR 8,300 million, which totally belonged to NIOC and was unnegotiable. NPC immediately embarked on feasibility studies for operating petrochemical projects.

In July 1965, the National Assembly and the Senate approved the petrochemical industry development law which had been introduced by NPC. The law authorized NPC to enter into direct talks with Iranian companies and institutes with a view to supplying petrochemical products.

The Articles of Association of NPC was adopted by the Cabinet in August 1965. The Articles called for

activities in all branches of petrochemical industry and affiliated industries, development and production and manufacturing of various petrochemical and chemical materials and products which are derived from oil and petroleum products, natural gas, hydrocarbons as well as other organic materials and minerals. Immediately after startup, NPC reviewed all measures which had earlier been taken with regard to the petrochemical industry, and concluded that IFP involvement and its partnership with NPC would not guarantee national interests.

The budget law, amended in 1964, delegated authority of all petrochemical industry activities to NIOC while the Shiraz chemical fertilizer plant was placed under administration of NPC. NPC changed the status of the fertilizer plant and registered it under Iran Chemical Fertilizer Company in 1965. This company had plants in Marvdasht, near Shiraz.



They produced urea nitrate ammonium, sodium carbonate and bicarbonate, citric acid and blended fertilizers. In 1965, NPC entered into talks with the US-based Allied Chemical Corporation and reached agreement on a 50-50 joint venture deal in December the same year.

The joint venture pertained to the establishment of a petrochemical plant at Shahpour Port (today known as Imam Khomeini). Shahpour Chemical Company (today renamed Razi) was established with an initial capital of \$100 million. The products supplied by this company were: sulfur, ammoniac, urea, ammonium phosphate, phosphoric acid, etc.

Another project which NPC mulled over from the very beginning was the establishment of a petrochemical plant in the vicinity of the Abadan oil refinery to produce plastics and detergents. To that end, an agreement was signed with American tire company BFGoodrich, which led to

the formation of the Abadan Petrochemical Company. In December 1965, NPC had signed an agreement with Amoco International, a subsidiary of Standard Indiana, for the establishment of a petrochemical plant in Kharg Island. In 1966, the Kharg Chemical Company was set up in coincidence with the Abadan Petrochemical Company.

From that time onward until 1986, a variety of petrochemical projects including Iran-Japan petrochemical corporation (Imam Khomeini), Iran Neptune Petrochemical Company (Farabi), Carbon Ahvaz, Pazargad and Shiraz Petrochemical Industries Development Corporation became operational. That was the first period of expansion of petrochemical industry in Iran. The 1979 Islamic Revolution and the subsequent suspension of petrochemical development projects in various areas, which coincided with the imposed war, largely drove Iran's petrochemical industry into stagnation.



## Naft Omidiyeh Archery

Iran's petroleum industry is supporting large numbers of sports teams within the framework of its investment in sports. Most of these teams have managed to win national and international titles, bringing joy to Iranian people. Archery is one of them. In the city of Omidiyeh in the oil-rich southwestern Khuzestan province, the archery team has been hiring talented local youths. The Naft Omidiyeh Archery may not have gained fame in the country as it has not had any extra spending like other archery teams in the Premier League; however, it has managed to maintain its status high. The main advantage with the Naft Omidiyeh Archery team is that it has introduced many archers to national team.

Amir Sadeqi-Panah

The Naft Omidiyeh Archery team officially started work in February 2011. From the very beginning, it was seeking to identify local youths interested in archery in Khuzestan Province. In the following years, the team has managed to register brilliant results thanks to efforts by local archers.

In 2014, the Naft Omidiyeh Archery team finished runner-up in the archery pro league. Three years later, it finished third. Since its establishment, the Naft Omidiyeh Archery team has been a serious rival to fellow teams and it has always combatted strong teams.

### Archery Hall

Generally speaking, archery is facing restrictions in Iran.

To deal with this problem, the Naft Omidiyeh Club moved to establish Iran's first exclusive archery hall as the club's objective was to train future archers. This hall has largely been used by Iran's Archery Federation to host archery matches in the country.

Iran's second archery hall was opened in the central city of Arak one month ago; however, the Naft Omidiyeh archery

hall is totally different owing to services it has rendered in recent years.

### National Archers

The Naft Omidiyeh Archery team has hired talented youths and family members of staff of National Iranian Oil Company (NIOC) in its squad. It has turned out to be successful in different age groups.

Led by Behzad Fouladvand, the team has attracted a large number of archers ranging from juniors to adults. By training them effectively, Fouladvand has promoted the archers to a high status.

Attention to archers has been a major point in the Naft Omidiyeh Archery team. That is why many archers from this team have joined national teams and managed to win medals in international matches. A prime example is Gholam-Reza Rahimi who was awarded in the 2016 Paralympic matches, bringing joy to Iranians. Likes of Rahimi have been numerous at the Naft Omidiyeh Archery team. This trend is set to bring about happy events in the country in coming years in archery.

### International Matches Absence

A challenge that archery clubs all across the globe are faced with is that there are no international archery matches. On the club scale, archery has no continental or global matches and everything is limited to the national level. If there were international archery matches, the Naft Omidiyeh Archery team might have shot to prominence. That is why motivated Iranian archers try their best to join the national archery team and represent Iran beyond borders.

Exclusive Interview

## Behzad Fouladvand, Naft Omidiyeh Archery Coach: We Owe Our Success to Local Archers

*Behzad Fouladvand had devoted huge efforts to archery in Iran. Thanks to his devotion and sense of duty, he has trained many archers for national team. The following is an interview with the head coach of the Naft Omidiyeh Archery team.*



► Would you please tell us about the Naft Omidiyeh Archery team's current situation?

Over recent years our team has effectively been racing ahead. Having employed NIOC staff's family and local youths in Khuzestan Province, we have managed to leave behind good days. Our current agenda remains identical and we hope to be able to record a brilliant future.

► How come you haven't thought of attracting national archers in recent years?

In any case, our constant objective and plan has been to identify and engage local youths. Of course our budget has been limited, but I personally enjoy

working with the youth and I feel delighted to have been able to act successfully by relying on young archers.

► Anything else you would like to add?

Petroleum Ministry officials and Naft Omidiyeh Club managers have done their utmost for the archery team and I offer my most sincere gratitude to them for what they have done in recent years. What I ask them is that permission should be given for the participation of the ministry staff's children in the archery games. Even if my request is turned down, we will do our best and I hope we would properly react to the confidence placed in us.

# Bishapur, Symbol of Sassanid Triumph

*Bishapur was built in 266 AD at the order of Shapur I (240-270). There were people living there up to the 14th century. According to inscriptions, Shapur I of the Sassanid dynasty had ordered the establishment of a city on the road connecting Persepolis to Ctesiphon. That came after Shapur I defeated Valerian, the Roman Empire. The road used to connect Ctesiphon to Susa during the reign of the Achaemenid dynasty. Bishapur is now located northwest of the city of Kazeroun in Fars Province in southern Iran.*



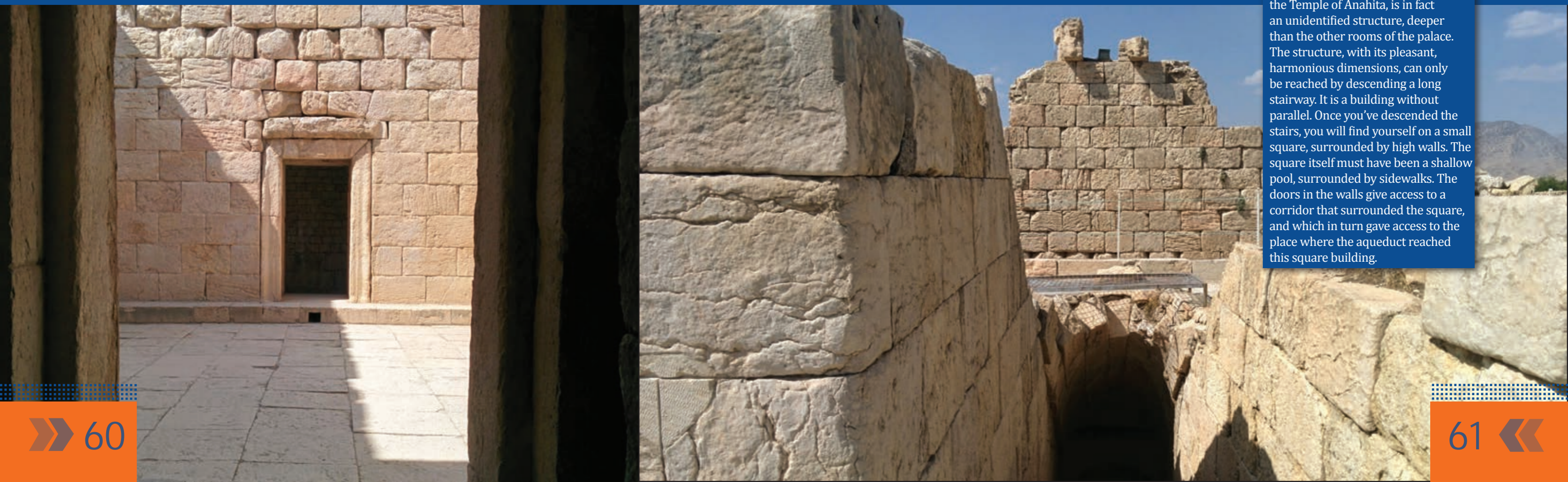
## Bishapur Structure

Royal Citadel: Anahita Temple, Shapur Ceremonies Hall, Mosaic Veranda, Valerian Palace  
Commons' Area: houses, hammam (bathroom), caravanserai and bazaar



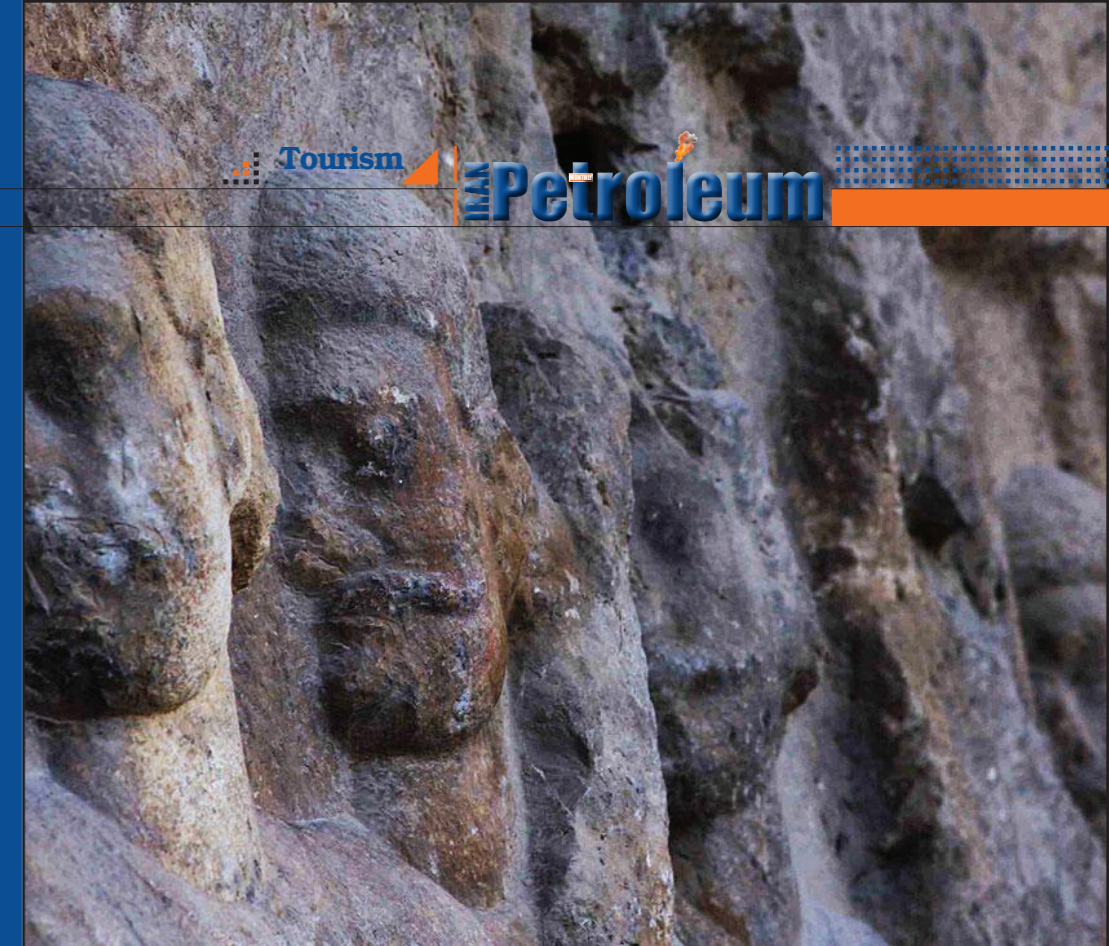
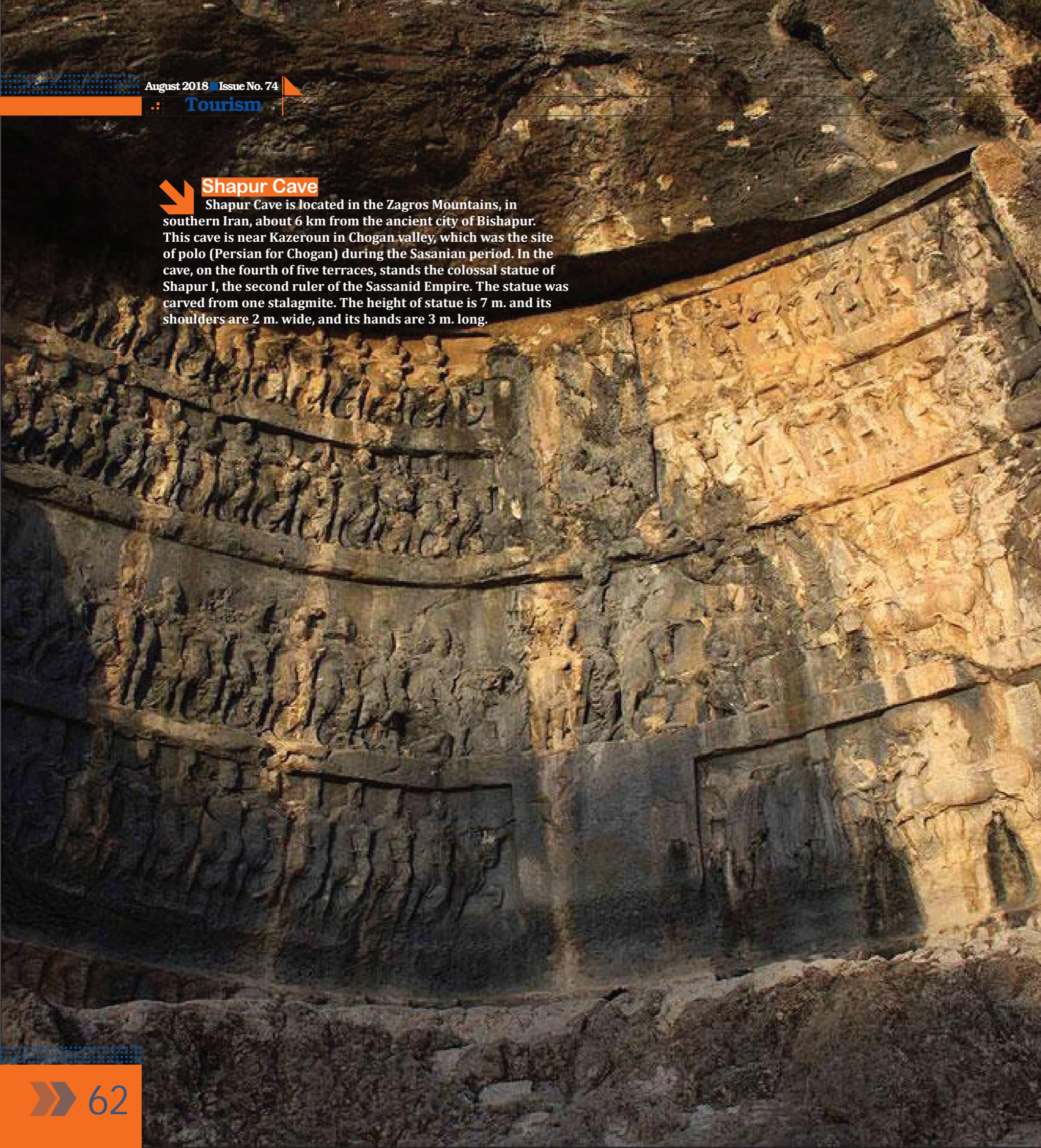
**Anahita Temple**

The building that is known as the Temple of Anahita, is in fact an unidentified structure, deeper than the other rooms of the palace. The structure, with its pleasant, harmonious dimensions, can only be reached by descending a long stairway. It is a building without parallel. Once you've descended the stairs, you will find yourself on a small square, surrounded by high walls. The square itself must have been a shallow pool, surrounded by sidewalks. The doors in the walls give access to a corridor that surrounded the square, and which in turn gave access to the place where the aqueduct reached this square building.



### Shapur Cave

Shapur Cave is located in the Zagros Mountains, in southern Iran, about 6 km from the ancient city of Bishapur. This cave is near Kazeroun in Chogan valley, which was the site of polo (Persian for Chogan) during the Sasanian period. In the cave, on the fourth of five terraces, stands the colossal statue of Shapur I, the second ruler of the Sassanid Empire. The statue was carved from one stalagmite. The height of statue is 7 m. and its shoulders are 2 m. wide, and its hands are 3 m. long.



### Bishapur Columns

These columns are located in the city center at the intersection of two main roads. Famous French archeologist Roman Ghirshman has said people used to distribute donations there. These columns are significant because the historical document of urbanization in Bishapur is engraved on one of them in Ashkanid and Sassanid scripts.



## Qualification Assessment Notice

**Subject: International Tender No. 97107 for APSTM and APSDM Processing of Onshore 3D Seismic Data on 4,000 sq km, Balaroud, Pardis and Tandis**

### Exploration Directorate

National Iranian Oil Company (NIOC) intends to put out to two-phase international tender the foregoing project whose details are outlined below. Qualified companies are invited to bid.

(The tender bid is estimated at €4,150,000)

- Required Services: Processing 4,000 square kilometers of Onshore 3D seismic data in Balaroud, Pardis and Tandis applying APSTM and APSDM.
- Duration of Contract: 15 Months
- Place of Services: Data Processing Center of Contractor Company
- Bidder Requirements:

- » Legal person status;
- » Availability of equipment and tools pertaining to the scope of work of the tender and skilled manpower;
- » Sufficient experience related to the subject of tender;
- » Affordability of posting €113,408 security guarantee as performance bond in accordance with regulations set out by Client, provided in the tender documents; and
- » Clearance from NIOC Security Division.

Applicants are required to submit their latest audited financial statements and officially introduce their duly authorized representatives to receive tender assessment documents from the Legal Affairs and Contracts Division of Exploration Directorate of NIOC, located at Close 1, Seoul St, Vanak Square, Tehran, Iran, no later than September 22, 2018.

Telephone: +98 21 82703227

Fax: +98 21 88604584

Furthermore, the required information should be submitted to the abovementioned address in the form of a folder of qualification assessment documents attached with a CD during the official working hours on October 13, 2018. It is obvious that documents submitted after the expiry of the determined deadline shall not be taken into consideration.

Tender documents shall be distributed among companies deemed to be qualified. (Venue, date and deadline for the receipt of documents, submission and opening of proposals shall be announced later on. The tentative date for opening financial proposals is January 8, 2019.

For any further information, the applicants may visit the following sites:

[www.SHANA.ir](http://www.SHANA.ir)

[www.niocexp.ir](http://www.niocexp.ir)

[www.iets.mporg.ir](http://www.iets.mporg.ir)

Public Relations Department  
Exploration Directorate

Kazeroun,  
Statue of Shapur I

